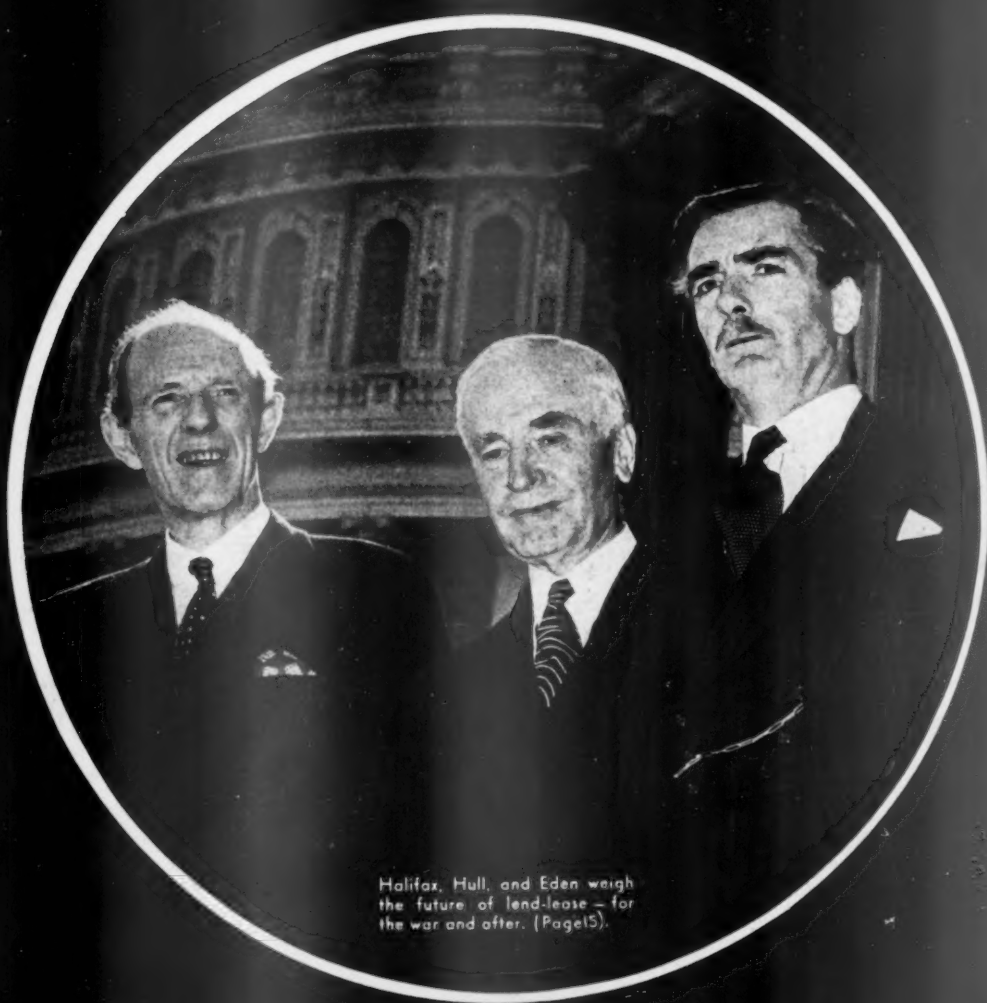


BUSINESS WEEK

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START
OF WAR
1939



Halifax, Hull, and Eden weigh the future of lend-lease — for the war and after. (Page 15)

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100 OCTANE GASOLINE

A Statement to the American People about their New Super Aviation Fuel...World's Finest!

- ... — 100 Octane Gasoline, the new super fuel to fly super planes, can be made by several methods.
- ... — There is only *one* method by which it can be made in the tremendous quantities needed by the United States and United Nations today.
- ... — That method is Catalytic Cracking, which makes in quantity a much higher quality fuel — i. e. more power — greater maneuverability and greater load-carrying capacity for planes.
- ... — Socony-Vacuum was the first to recognize the possibilities of Catalytic Cracking — we brought to this country Eugene Houdry, the inventor of the Houdry Process, and worked with him in developing and perfecting Catalytic Cracking.
- ... — Socony-Vacuum was the *first company in the world to produce 100 Octane Gasoline in commercial quantities by the use of the Catalytic Cracking Process.*
- ... — Socony-Vacuum has produced more Catalytic Cracked base stock for 100 Octane Gasoline than any other company.

... — Thus, America when the war began had available the world's finest aviation gasoline — and methods and equipment to produce it in quantities for the world's mightiest air fleets.

... — Today through Socony-Vacuum's New Thermoform Continuous Catalytic Cracking Process — a further development — we are enabling America to increase the quantity and quality of 100 Octane Gasoline.

What this will mean to you — tomorrow!

America can expect lighter, faster, more efficient engines for the peace-time "air flivvers" and dream cars to come.

40 to 50 miles per gallon of "gas" is no longer just "visionary"!

The "100-octane-plus" gasolines already being developed will take the wraps off inventors and designers — make possible more powerful, higher-compression engines of all types.

Working constantly to improve petroleum products for War and for Peace — is Socony-Vacuum's pledge of Friendly Service to America.

SOCONY-VACUUM OIL COMPANY, INC.

and Affiliates: Magnolia Petroleum Company, General Petroleum Corporation of California

Mobilgas Mobiloil

The Sign of Friendly Service



Tires Made with B. F. Goodrich Synthetic Now Rolling on Army Trucks

A typical example of B. F. Goodrich leadership in truck tires

MANY a U. S. Army truck is rolling today on tires made with B. F. Goodrich synthetic rubber—Ameripol. Here man-made rubber is getting its final tests—tests no proving ground could ever match.

And big city buses in Chicago, New York, Boston, Cleveland, and other cities are now rolling on tires made with B. F. Goodrich synthetics, too.

This does not mean that synthetic rubber is plentiful. Only a fraction of the nation's requirements is being produced today. But it does mean that B. F. Goodrich, the only company

to offer tires made with synthetic rubber to the general public before the war, is still pioneering in this great development.

And it means that America will never again be entirely dependent upon foreign sources for its rubber supply. With peace, your truck and your car may have tires made wholly or partially of synthetic rubber. When that time comes remember that B. F. Good-

rich, 'way back in 1940, was *first* to offer tires of synthetic rubber for sale.





**FOR
BERLIN**



★ Republic Distributors are providing invaluable service to industry engaged in the war production program—offering an organized service and saving time and trouble on equipment maintenance problems.



Laid with Rubber

HIGH explosives of modern warfare are being produced in great quantities for both demolition and propellant use. In these arsenals and in the contributing chemical industries many manufacturing operations are found to be dependent upon mechanical rubber products.

Specialized chemical resistant hose, pump valves, gaskets and packing help produce accessory sulphuric and nitric acids used in the production of explosives. Conveyor belting for sulphur bearing ores, pneumatic and hydraulic hose, acid resisting belts and rubber linings for chemical tanks are all vital rubber requirements. Static conducting conveyor and transmission belting in loading plants and static conducting floor matting eliminate dangerous explosive hazards.

Bringing its wealth of experience in producing mechanical rubber products to the war effort, Republic is devoting its many facilities to furnishing the nation's arsenals, its chemical plants and other industries with necessary items made from crude rubber, synthetics and reclaimed rubber. Until "unconditional surrender," that is Republic's total job.



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YOUNGSTOWN • OHIO

HOSE • BELTING • MOLDED GOODS • PACKING • EXTRUDED PRODUCTS

DIVISION OF
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BUSINESS WEEK

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Seeing Nellie Home

...another job for HYCAR SYNTHETIC RUBBER

Nellie has been nicked. Some of the enemy fighters she met will never fly again . . . but that last one got in a burst that drilled a dozen holes in Nellie's fuel tanks. Now, high over hostile territory, and hundreds of miles from base, she's heading home.

Make it? Sure she will. Nellie's fuel is carried in self-sealing tanks, made possible by Hycar gasoline-resistant synthetic rubber. Almost instantly those bullet holes closed, sealing in the precious fuel that will keep her flying. Hycar is "seeing Nellie home".

The selection of Hycar for this critical application where so much is dependent upon so

little, where even partial failure cannot be tolerated, was based solely upon its performance record. Whatever *you* need in a flexible or resilient material, the ingenuity and years of pioneer development work behind Hycar will give to you the same kind of safe, trouble-free, dependable service.

And whether the prime requirement is excellent resistance to oil or abrasion, hardness or softness, good electrical properties or operation over a wide range of temperatures, each type of Hycar is a known quantity. In hose, vibration dampeners, hydraulic seals, packing, pistons and hundreds of other uses, Hycar has been proved by field experience.

Hycar is sold in crude form only, to fabricators of rubber products. We will be happy to work with you and them in applying Hycar to your own requirements.

HYCAR CHEMICAL COMPANY
AKRON, OHIO

LARGEST INDEPENDENT PRODUCER IN AMERICA OF BUTADIENE SYNTHETIC RUBBER



YOU can earn a place in this landing barge!

You may not be there in person . . . but in spirit you can be part of every invasion that hits the Axis. You can earn that right by . . . thoughtful buying!

How can thoughtful buying do

this? Here's the answer in very few words. You buy, for your company or yourself, only the longer-lasting things . . . and you buy them only when you must. That means less needless use of America's materials.



Of specific help to Industry, in its efforts to get the utmost out of the batteries it employs, are the instructions prepared by Exide Operating Engineers on how to prolong the life of every Exide. In writing for these instructions, please specify the *type of service* involved.

It eases the pressure on our factories and labor. It releases all of the production elements for the far more pressing calls of war.

For 55 years the name "Exide" has symbolized dependability, long life. Exide research has covered in detail the application of storage batteries to practically every business. This information is available to executives on request.

THE ELECTRIC STORAGE BATTERY COMPANY
PHILADELPHIA
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Exide BATTERIES

FOR EVERY STORAGE BATTERY PURPOSE

Business Week • March 27, 1945

WASHINGTON BULLETIN

WHAT THE WASHINGTON NEWS MEANS TO MANAGEMENT

Civilian Supply Showdown

More for the civilian is what nearly everyone in Washington now favors. Hearings this week on the Maloney bill to set up a separate Office of Civilian Supply under Economic Stabilization Director James F. Byrnes are bringing the whole issue to a showdown.

The bill itself is encountering opposition from the war agencies, but everyone except the military supports the bill's basic objective. The urge to go easier on the civilian showed itself first in response to pressure from the new Congress, but it has now pervaded all the civilian agencies.

Disagreement is over the methods of getting more goods and services to the man in the street. War controls over materials, prices, and manpower have been designed with the whole purpose of routing practically everything to the services. It is a tough job now to change, especially in the face of the Army's vast authority and purchasing power.

In or Out of WPB?

Large segments of Congress and the run of business men in civilian lines favor the Maloney bill as a springboard for getting action. They want the Office of Civilian Supply strengthened as a spokesman for civilians and taken out of WPB's clutches.

Donald Nelson and Charles Wilson of WPB believe that OCS should be strengthened, but they don't want it put in the hands of Economic Stabilization Director James F. Byrnes. The plan is, if OCS is left in WPB, to attach it directly to Wilson, put in two or three new men in top positions, and force out its director, Joseph L. Weiner who is a protégé of the repudiated Leon Henderson.

Weiner and the other OCS officials favor the Maloney bill; they do not like the OCS position inside WPB. They realize that, whatever the outcome, they personally are finished because they cannot shake off their reputation from the days when they were the principal advocates of cutting into civilian production—and Congress does not like their looks. But their experience now with the practical difficulties of routing stuff to the civilian has convinced them of the necessity for a strong independent OCS, whoever heads it.

More Integration Needed

Raw material supply, once the key issue, is no longer the biggest difficulty

(BW—Mar.13'43,p5) in getting civilian supplies. Tight controls of the Production Requirements Plan and the Controlled Materials Plan make it possible to route materials into the civilian factories, but the Office of Civilian Supply would like more voice in over-all allocations. The difficulty is to prevent Army buyers from using their high priorities and unlimited funds to snap up the supply of civilian-type products after they are manufactured, to see that they actually do reach the civilians.

Even tougher are the problems of manpower, transportation, fuel, rubber, etc., in which OCS has no voice at all. It does no good to get boilers for a laundry if fuel cannot be had. It does no good to get repairs for hotel elevators if the elevator operators are hauled into the Army.

Especially worrisome at the moment are the following civilian problems: lack of repairs and maintenance parts; lack of care to preserve the distribution system; lack of care to preserve hotel, laundry, and similar services in congested areas; and the near-shutdown and diversion of production of such items as batteries for farm radio sets, acetate, hearing aids, stove parts, etc.

From Bedrock to Barebones

Stymied at every turn, Office of Civilian Supply a few weeks ago brought out a hypothetical bedrock report to bolster its position statistically (BW—Feb.13'43,p16). Even this was misinterpreted. Critics said the "bedrock" was too low—although the main aim of OCS was to have something on paper to combat the military agencies which, unlike civilian agencies, are always united in their claims for more and more material.

Now OCS has a second project under way as backstop: a genuine list of products needed in a barebones economy. This one is not mere statistical calisthenics. It is a list of actual products compiled by retailers themselves.

The first such list is in the field of metals, includes 200 products, like pots, pans, etc. Five major retailers helped make it up. Next, a similar list will be drawn up for semidurable goods, then one for soft goods, and so on for every major field of supply.

In addition to getting up the lists, OCS wants:

- (1) A guarantee of materials.
- (2) A guarantee that the finished product will get into the hands of civilians, not military agencies.
- (3) A guarantee that the products will

be sold and serviced through a distribution system equipped with sufficient manpower and allowed to charge prices that will bring a profit.

(4) A guarantee that the products will be made in the biggest possible quantity through concentration and, above all, standardization.

In short, OCS feels that the civilian will never get a break until he is treated like a soldier—dealt with on a centralized basis, with every part of his needs planned in advance.

Parity Arguments Revised

Farm organization leaders now figure on abandoning the whole concept of parity as a wartime price-setting mechanism. That is why they no longer care much about the Pace bill to boost parity by inclusion of farm labor costs and are studying alternative legislation.

In wartime, they now argue, the rule on farm prices should be to keep them high enough to bring out the necessary production, regardless of parity. For example, they are urging that potato production be encouraged by government supported prices, instead of parity prices plus incentive subsidies. They suggest that Army buying power could be used.

For the long pull after the war, when parity becomes a matter of floors rather than ceilings, farm leaders are exploring a general revision of the parity formula.

Spur to Farm Prices

It won't be hard for President Roosevelt to veto the two farm price increase bills now scooting through Congress. John L. Lewis's \$2-a-day demand is threatening to bust the Little Steel formula on wages, and the National War Labor Board admits it cannot hold to the formula if the bills pass.

Farm leaders are confident they can override a veto of the Bankhead bill to forbid inclusion of benefit payments in computing price ceilings; it gains votes because it is a rebuke to executive flouting of Congress's intent in passing the price law. The farm bloc, however, does not think it can get past a veto of the Pace bill since even the farm organizations are willing to let it go overboard (BW—Mar.20'43,p5).

A Political Paradox

The fight in Congress over cutting from \$65,000,000 to \$27,000,000 an appropriation for moving farm labor goes deep into farm organization politics. There is no other explanation why



That's no Dove of Peace he's building...

Give the devil his due. The Japs didn't invent mechanized warfare, but they are pretty good at copying. They have even taught us something: *how to stretch to the utmost materials for making the weapons of war.*

We can't stop the Japs from producing planes and guns and other weapons—not just yet, anyhow. But we can outproduce them. Plant for plant, man for man, we are fighting Japan's industrial armies.

Truly this war is called the "Battle of Production." More and more of the workers of this country are realizing that they are "soldiers of production," challenged by the slave labor of the

Japaxis nations to show what free men and women can do when they go all out to win.

It is in this spirit that some 4000 men and women are today engaged in the processes of making Ethyl antiknock fluid. Conscious that their product goes into every gallon of America's high-octane military gasolines, they are concentrating their time and skill on making good their own war slogan: "*Every drop of Ethyl counts.*"

ETHYL CORPORATION

Chrysler Building, New York City

Manufacturer of Ethyl fluid, used by oil companies to improve the antiknock quality of aviation and motor gasoline



Business Week • March 27, 1942

farm bloc congressmen voted to cut the appropriation despite the acute farm manpower situation.

The Agriculture Dept.'s Extension Service (Four-H Clubs, county agents, etc.) always has been considered an official adjunct of the Farm Bureau. The Farm Security Administration has played close to the labor-minded Farmers Union. So when the \$65,000,000 request went to Congress, the Farm Bureau had its Capitol Hill surgeons prune the bill most of the money designated for Farm Security.

Other farm organizations, like the National Grange, were not too keen on letting the Extension Service get all the remaining funds, but as between the Farm Bureau and the Farmers Union, they had to give lip service to the former.

Prospective Wheat Imports

The American livestock count, especially of hogs, is now so high that Canadian wheat imports are almost certain to become necessary within a year. That will be the situation despite the fact that domestic supplies of corn and wheat are still tremendous.

An Agriculture Dept. delegation headed by the food distribution boss, Roy F. Hendrickson, went to Ottawa last week end to confer with Canadian officials and map a joint food production program. A possible deal on wheat reportedly was discussed.

Price Deputy on Probation

James L. Palmer, unassuming, hard-bugging vice-president of Marshall Field & Co., Chicago, does not come to OPA with a formal appointment as senior deputy administrator, succeeding John E. Hamm.

But if he likes the job—and the job likes him—he will probably get the title. If not, Price Administrator Prentiss M. Brown will continue his search.

Brown picked Palmer as a top-flight retailer to take a hand in OPA's reorganization. As such he will become a member of the reorganization committee headed by former Sen. Clyde L. Herring.

When this committee has polished off the job of simplifying OPA's intricate price control mechanisms, Palmer, a former professor of marketing at the University of Chicago School of Business, is expected to assume administrative responsibility.

Labeling Prospects Fade

OPA's oldtimers (headed by Dr. J. Kenneth Galbraith, deputy administrator in charge of prices) and the new-

comers (headed by Administrator Prentiss M. Brown's righthand man, Lou Maxon) are in a death grapple over two issues: (1) removal of ceilings on luxury goods, and (2) grade labeling.

Galbraith is holding out for the mandatory labeling of canned goods by government grades. He also considers removal of ceilings from luxury goods as a show of weakness on OPA's part.

Maxon, on the other hand, wants to liberalize and humanize OPA. Brown is inclined to play ball with Maxon. In fact, an order exempting some luxury items from control was quietly put in the mill last week, will emerge soon (BW—Mar. 13'43, p7).

As for labeling, Brown will throw that hot potato to Congress (specifically, the House Agriculture Committee). As soon as Congress scowls at labels Brown either will drop the labeling idea entirely or will merely require notification of grades on invoices rather than on the cans themselves.

Brown could work the same strategy without congressional aid, but lately the labor unions have evinced a mild interest in labels and grades, and Brown doesn't want to offend them.

Service Awards Reversing

Aware that prestige of the Army-Navy E pennant for outstanding performance

in war production will tend to drop as awards become more numerous, the services are keeping close tab on their winners.

Pennants are being withdrawn from plants that fail to maintain exacting standards because of strikes, increasing absenteeism, or other causes. Performance of winners comes up for review every six months or so on the basis of reports by government plant inspectors.

The Navy has withdrawn pennants from more than a dozen plants whose employees may no longer wear the award pins.

So far, no pennants have been withdrawn at the Army's instance. The Army did not participate in the award system until last July, a year after it was instituted by the Navy.

Carnegie-Illinois Sued

The Truman committee only started the trouble with its disclosure this week that Carnegie-Illinois Steel Corp. employees falsified metallurgical analyses on quantities of steel supplied for war uses (page 30).

In less than 24 hours the corporation and eight of the employees identified in the deception were sued for double damages under the informer's act of 1863, enacted to curb Civil War frauds.

Duplicate suits, each asking in excess

Lewis Showdown Deferred

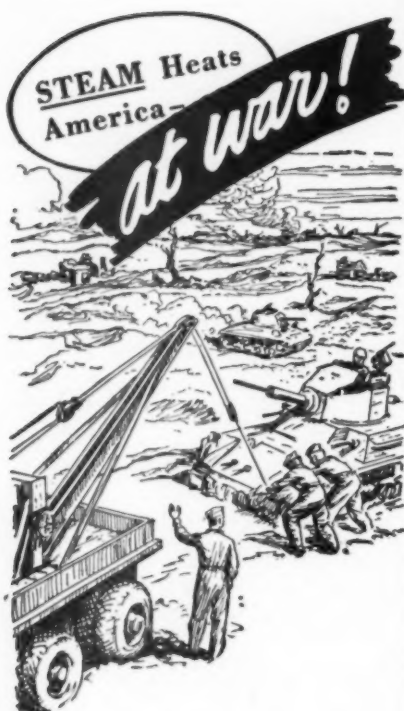
All the feinting, dodging, and shifting that occurred this week in the negotiations between the coal operators and the United Mine Workers have not significantly altered the positions of the principals in this momentous game of tag. John L. Lewis is still "it" and whether or not he chooses to run the operators or the government into a corner, the fact remains that continued coal production is at stake.

● **Price Concession Seen**—One thing was achieved by the week's maneuvering. The threatened showdown, by no means averted, has been deferred. The operators, reluctant to agree to continuing operations beyond Mar. 31 on the basis that eventual new contract terms would be retroactive, were put on the spot when President Roosevelt wired a request that negotiations continue past the deadline date, if necessary, with a retroactive application. Employers took the wire as a ukase that carried with it the promise of higher price ceilings for coal if

wages should be permitted to go up.

The fact that Lewis had proposed extending negotiations and a retroactive application of the terms eventually agreed upon did not mean that the union scored the first point. The President's message asked for continuing negotiations and the "uninterrupted production of coal" until all "differences are finally resolved." It also stated unequivocally that "if any wage adjustments are made they must, of course, be made in accordance with the act of Oct. 2, 1942, and Executive Order No. 9250." These are the legal bases for the Little Steel formula, under which the miners are not entitled to any part of the \$2-a-day wage increase they are asking.

● **Battle Plans Unchanged**—Lewis, of course, cannot accept the Roosevelt proposal in toto without giving up his fight for a pay boost. He has agreed to continue the negotiations through April. Then, if he isn't given enough to satisfy him, he will almost certainly strike. This was U.M.W.'s original strategy.



FRONT-LINE mobile Machine Shops...

For tank repairs under fire...

For rebuilding damaged planes, guns and motorized weapons...

It's the job of American Industry to produce and equip all the Mobile Machine Shops needed to keep the Army at peak efficiency.

It calls for round-the-clock production in thousands of war plants producing welding tools, lathes, valve grinders, other garage equipment.

These plants need the finest heating equipment that America can provide... for proper heating is essential to maximum output.

Steam, harnessed and brought under control with Webster Systems of Steam Heating, has proved its ability to provide comfort, economy and trouble-free operation.

Today, we are engaged in direct war work, but manufacturing facilities are still available to supply Webster Steam Heating Equipment for buildings serving the war effort.

Essential repairs for Webster Systems are available under W. P. B. Order P-84.

Warren Webster & Company, Camden, N. J. Representatives in principal U. S. Cities



WASHINGTON BULLETIN (Continued)

of two million dollars, were filed in the U. S. District Courts at Pittsburgh and Chicago by Herman M. Cogan of Chicago, a private citizen. Cogan must underwrite the costs, but he would split any judgment equally with the government.

Though 80 years old, the informer's act survived its first major test in the U. S. Supreme Court only two months ago when a judgment of \$315,000 won by an informer against a number of Pittsburgh electrical contractors was sustained (BW—Jan. 23 '43, p. 8).

Army's Wildcatting

Harold L. Ickes's Petroleum Administration for War is angry because the War Dept. won't keep PAW posted on what the Army is doing in the way of oil development in northern Canada.

Censorship has squelched everything but the bare fact that the Army, with a huge fund at its disposal, is underwriting wildcatting and the development of a small field at Fort Norman. The Army hopes to supply a pipeline, now partially built, extending to a point on the Alcan highway where a small refinery, brought from Corpus Christi, Tex., is being set up. Imperial Oil Co., Ltd., and Union Oil Co. of California are on the ground.

Output, present and potential, is reported to be small, not more than the region itself will consume in peacetime.

No CMP Revolution

Changes in the Controlled Materials Plan will not be so quick or drastic as first intended when Charles E. Wilson took over from Ferdinand Eberstadt.

Handling of "B" products and the "B" product list are to be frozen through the third quarter; in the fourth quarter, the list will be revised. Whether operation of the plan as to "B" products will be changed in the fourth quarter depends on success in scheduling their production.

With sound scheduling, it is believed that mechanics of material allocation will not matter, though some paperwork may be eliminated by a partial return to Production Requirement Plan procedures.

Sniffing at Stockpiles

Industry is getting disturbed about the postwar implications of the huge stockpiles of raw materials now being accumulated by the government.

The New York Coffee and Sugar Exchange, for instance, took full page ads in Washington papers last week to answer a statement of the Board of Eco-

nomic Warfare that BEW will need free hand after the war in disposing overseas stocks of commodities; the exchange insists that stocks ought to be disposed of through trade channels.

At the Reconstruction Finance Corp. whose subsidiaries are stockpiling some 200 products ranging from copper to quinine, the bright young men are already discussing possible use of stockpile buying and selling operations as long-range means of manipulating the economy.

The National Resources Planning Board's postwar report (BW—Mar. 2 '43, p. 15) recommends continued stockpiling of strategic materials after the war.

Stirring Up Sugar Prices

Certain enactment of the Bankhead bill requiring full parity prices for farm products will reopen the controversial and complicated sugar price question.

The measure will mean increased price ceilings for both domestic cane and beets since benefit payments to producers under the present sugar act are included in fixing existing price levels. Higher cane and beet prices will call, in turn, for higher price ceiling on refined sugar—increases that are expected to range between 1¢ and 1½¢ a pound.

Any increase in domestic sugar price is bound to bring demands from Cuba and other offshore producers for similar raises. Cuba, which has been unable to ship its full production of sugar to the U. S. because of lack of transportation facilities, has been pressing for an increased price for some time.

Capital Gains (and Losses)

American investments in South America are reaching a huge total. At a recent House Appropriations Committee hearing, one congressman estimated them at two billion dollars since war began. The postwar competitive angle is what worried many congressmen.

OPA would be glad to have the results of any private surveys of the movement of processed foods under rationing. OPA intends to make its own surveys but, as usual, is financially down at the heels.

Donald Nelson's vacation has revived speculation on how long he will stay at the head of WPB. Friends note that he has aged in the past year, and that he is worrying about his own health even though his doctors assure him he is fundamentally sound.

—Business Week
Washington Bureau

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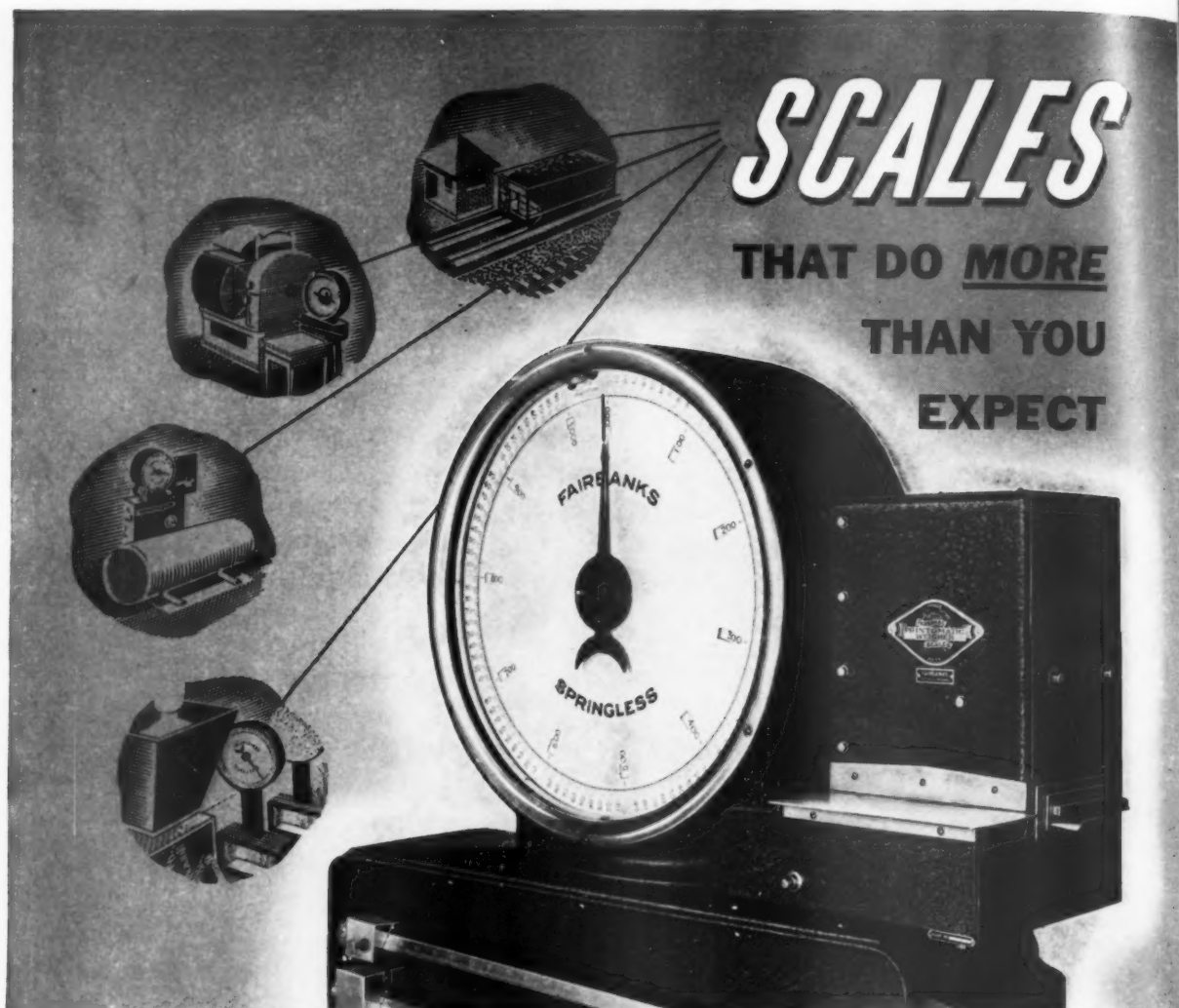
from the temporary lack of Nickel.

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SCALES

THAT DO MORE
THAN YOU
EXPECT

OF course, Fairbanks Scales are big, husky, and accurate. You have a right to expect these things in *any* good scale—and particularly of Fairbanks Scales with the world's broadest scale manufacturing experience behind them.

The feature about Fairbanks Scales that may surprise you the most, is their ability to do things you *don't* expect of scales.

Here are a few of many jobs done by Fairbanks Scales:

- They count small parts—more accurately than manual counting
- They weigh carloads of coal in motion and make a printed record of each weight
- They automatically control paint ingredients
- They automatically control aggregates
- They "keep the books" in steel plants, making printed records of incoming and outgoing shipments
- They keep accurate records on chlorination in water treatment
- They record the *flow* of liquid chemicals
- They guard secret formulas in compounding
- They control batching in bakeries
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FIGURES OF THE WEEK

	\$ Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
THE INDEX (see chart below)	*201.1	†200.3	197.0	188.0	176.0
PRODUCTION					
Steel Ingot Operations (% of capacity)	99.1	99.3	97.7	96.2	99.0
Production of Automobiles and Trucks	18,010	17,560	17,830	20,960	28,875
Engineering Const. Awards (Eng. News-Rec. 4-week daily av. in thousands)	\$12,749	\$12,456	\$13,315	\$30,987	\$31,717
Electric Power Output (million kilowatt-hours)	3,947	3,945	3,949	3,757	3,357
Crude Oil (daily average, 1,000 bbls.)	3,904	3,877	3,874	3,936	3,692
Bituminous Coal (daily average, 1,000 tons)	2,100	2,058	2,033	2,093	1,842
TRADE					
Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars)	76	74	76	83	87
All Other Carloadings (daily average, 1,000 cars)	52	51	51	65	46
Money in Circulation (Wednesday series, millions)	\$16,115	\$16,205	\$15,845	\$13,440	\$11,474
Department Store Sales (change from same week of preceding year)	+3%	+14%	+45%	-3%	+24%
Business Failures (Dun & Bradstreet, number)	97	91	96	117	193
PRICES (Average for the week)					
Spot Commodity Index (Moody's, Dec. 31, 1931 = 100)	248.0	247.3	246.1	233.4	229.7
Industrial Raw Materials (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	159.5	159.3	158.5	155.0	154.2
Domestic Farm Products (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	207.6	206.9	204.1	183.6	181.7
:Finished Steel Composite (Steel, ton)	\$56.73	\$56.73	\$56.73	\$56.73	\$56.73
:Scrap Steel Composite (Iron Age, ton)	\$19.17	\$19.17	\$19.17	\$19.17	\$19.17
:Copper (electrolytic, Connecticut Valley, lb.)	12.000¢	12.000¢	12.000¢	12.000¢	12.000¢
:Wheat (No. 2, hard winter, Kansas City, bu.)	\$1.39	\$1.41	\$1.37	\$1.20	\$1.21
:Sugar (raw, delivered New York, lb.)	3.74¢	3.74¢	3.74¢	3.74¢	3.74¢
:Cotton (middling, ten designated markets, lb.)	21.16¢	21.06¢	20.89¢	18.72¢	19.55¢
:Wool Tops (New York, lb.)	\$1.290	\$1.264	\$1.246	\$1.203	\$1.311
:Rubber (ribbed smoked sheets, New York, lb.)	22.50¢	22.50¢	22.50¢	22.50¢	22.50¢
FINANCE					
90 Stocks, Price Index (Standard & Poor's Corp.)	86.7	87.5	85.5	68.8	64.8
Medium Grade Corporate Bond Yield (30 Baa issues, Moody's)	4.01%	4.02%	4.07%	4.27%	4.30%
High Grade Corporate Bond Yield (30 Aaa issues, Moody's)	2.76%	2.77%	2.77%	2.80%	2.87%
U. S. Bond Yield (average of all taxable issues due or callable after twelve years)	2.33%	2.34%	2.32%	2.34%	2.35%
U. S. Treasury 3-to-5-year Note Yield (taxable)	1.25%	1.25%	1.25%	1.27%	0.94%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average)	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6 months, N. Y. City (prevailing rate)	½-¾%	½-¾%	½-¾%	½-¾%	½%
BANKING (Millions of dollars)					
Demand Deposits Adjusted, reporting member banks	32,385	32,116	30,620	28,085	25,010
Total Loans and Investments, reporting member banks	42,198	41,861	41,365	34,358	31,031
Commercial and Agricultural Loans, reporting member banks	5,802	5,804	5,856	6,317	7,035
Securities Loans, reporting member banks	907	842	963	816	825
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks	29,343	29,108	28,424	20,588	15,759
Other Securities Held, reporting member banks	3,296	3,265	3,260	3,457	3,826
Excess Reserves, all member banks (Wednesday series)	2,130	1,880	1,992	3,039	3,161
Total Federal Reserve Credit Outstanding (Wednesday series)	6,699	6,390	6,214	3,857	2,351

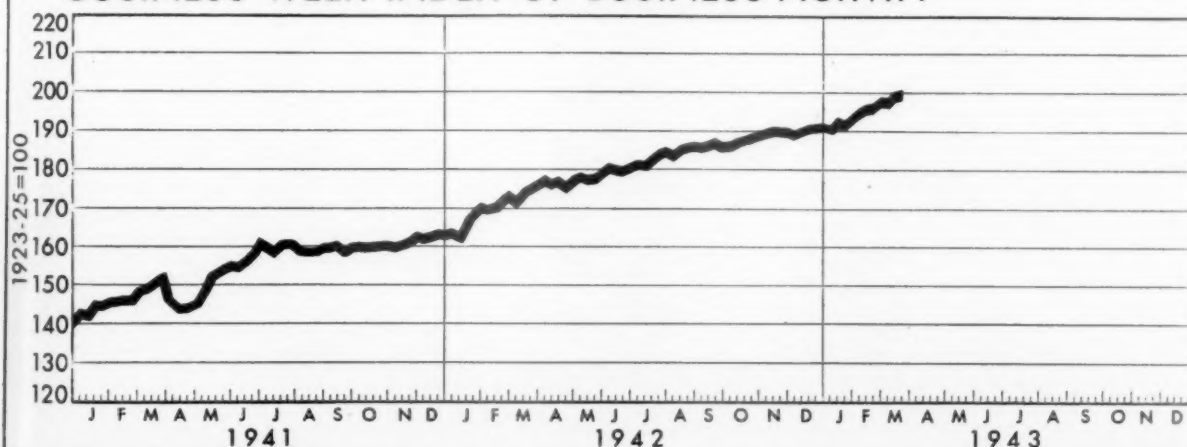
* Preliminary, week ended March 20.

† Ceiling fixed by government.

‡ Revised.

§ Date for "Latest Week" on each series on request.

BUSINESS WEEK INDEX OF BUSINESS ACTIVITY



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THE OUTLOOK

Turning-Point on Profits

With production due to flatten out and taxes reaching top, earnings prospects now hang on management's ability to squeeze out a margin between rising costs and fixed prices.

The Allied offensive in Tunisia (page 44) this week took the headline play away from new moves on the wage and farm price fronts, the Senate vote to repeal the salary limit, the announcement of meat-cheese-fat point values, the rash of minor headaches with CMP, and similar domestic developments.

Profit Factors Change

Business men who have finished digesting 1942 annual profit and loss statements and who are looking to the future begin to see a new and different meaning for profits prospects.

For the remainder of the war period is apt to mark a significant change from 1942 and preceding war years in the basic factors determining earnings. Until now, the chief influences have been the increase in gross activity on the one hand and the successive boosts in corporate tax rates on the other. Last year, according to the Dept. of Commerce, profits before taxes soared, but net was cut down by tax boosts to 6% below 1941 for all companies and to lower levels in many basic industrial lines.

Corporate tax rates are for the most part now in final form for the duration, except for the possibility of a small rise in the surtax on "normal" profits. But also, at least in the latter part of the year, business activity will tend to flatten off, if not even to decline. Gains in the business index certainly will be small in the second half of 1943 (BW-Mar. 13'43, p13), and such lines as retailing and services will actually see a falling off.

Rising Costs

Hereafter, therefore, profits will primarily depend upon prices and costs. And they are apt to be pinched. Take steel, for instance.

Only recently, the shift to six-day operations in coal mining necessitated a price increase in coal, in order to maintain productive profit margins. This lifted raw material costs for steel. Now, lengthening of the steel work-week is a virtual certainty, though labor and management in the industry are still debating the extent of the manpower pinch and the need for going up to 48-hour operations.

The War Manpower Commission already classifies Buffalo, Baltimore, Detroit, and the sizable Calumet district

around Chicago as labor-shortage areas in which hours are to be stretched (page 100). Pittsburgh, Cleveland, Canton, and other steel centers are expected to have labor shortages in six months, and so extension of hours may be anticipated there, too. Time-and-a-half pay for the overtime will lift costs, and so will any further decline in the average efficiency of workers, as able-bodied men are drafted and replaced by less productive labor.

Wage Increases?

On top of that, wage issues still are undecided (pages 7, 95). An increase for coal miners would jump coal prices again and would be followed by a hike in steel wage rates; indeed, some executives anticipate a wage increase and are

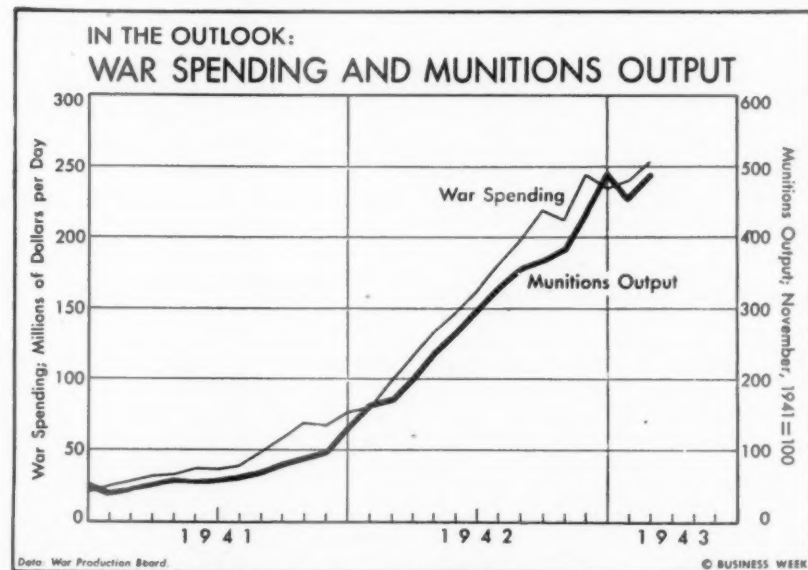
already budgeting for it. A 10% boost, overtime, and lessened efficiency might lift labor costs alone by 20% or more this year.

However, steel prices are not likely to be allowed a compensating rise because the industry is earning excess profits as it is. That means, of course, that the increased costs will reduce excess profits taxes and so will be largely borne by the Treasury, rather than by net profits.

Textile Shrinkage

Cotton textiles provide another instance of this pinch. Raw cotton prices have risen since August from about 18.5¢ a pound to about 21¢ now. Cloth prices, though once tied to raw cotton, have for months been fixed. Result is a 2.5¢ decline in mill margins (computed for 17 textile constructions) since August to around 19.75¢ a pound now. And this index does not take account of higher premiums for better-grade cottons, now in increasing use.

Of course, this 19.75¢ margin between raw cotton and cloth seemingly compares well with an average margin of 16.35¢ a pound in 1940, and one of



The munitions index measures production of tanks, planes, ships, and other direct war weapons. War spending counts expenditures for munitions but also includes those for other items—construction, military pay, lend-lease food, etc. As the chart shows, these "other items" have thus far pushed total spending ahead of munitions. From here on, this will reverse, especially as effort is diverted from construction to direct armament.

By the year-end, the spending rate should rise 25% to nearly \$100,000,000,000 a year, but the munitions index should jump 50% to about 750. However, from November to February, both indicators flattened. New points on the curves for the next few months will show more clearly whether this flattening is temporary, or whether it bodes a failure to complete in full the total war program that has been projected for 1943.



Spring weather is quickening work on the eastern leg of the "Big Inch" pipeline. Last week, work crews started the line across New Jersey (above) from the Delaware River above Trenton. About 200 miles of the 867-mile leg have been laid. Work is underway on all spreads except the feeder into Bayonne, N. J.

12.68¢ in 1939. However, wage costs have soared. Indicative are the hourly rates in all textile fabric manufacturing—46.0¢ in 1939, 48.2¢ in 1940, then to 61.6¢ in August, 1942, and up again to perhaps 66¢ now, or a jump of more than 40% in four years. Now the industry is being urged to go on a 48-hour week.

In the over-all, of course, corporate profits will not be pinched so severely as cost trends might indicate. Excess profits constitute one partial cushion. Where these do not obtain, both price-fixing and contract-renegotiation authorities are apt to place the maintenance of some production incentive—profit margins—above considerations of holding price levels.

Production Troubles

Ultimately, perhaps, the chief impact may come from a drop in production. In steel, for instance, it is clear that the expansion program will not be completed on schedule because of difficulty in obtaining key components for new plants. When new capacity does come into operation, it may merely make possible the banking of existing furnaces for long-needed repair.

This has happened in textiles. While southern mills have barely maintained output at the peak rate attained last spring, New England cotton factories are producing 15% less than a year ago, due to a lack of labor.

Oil Gushes East

Supply will rival that of 1941, but restrictions on civilian use won't be lifted; it's for the services.

New pipeline and barge construction, coupled with continued high movement of oil by rail, promise the East supplies of petroleum products next fall and winter fully as high as any month during 1941, according to careful estimates prepared by the transportation committee of the Petroleum Industry War Council working in close cooperation with government authorities (chart below).

• **Restrictions to Remain**—But the prospects are for continued tight restrictions on the use of both gasoline and fuel oil and further pressure to convert oil burners to coal. The explanation is that the Army and Navy intend to take large quantities of oil from East Coast ports as long as there is fighting in Europe. Figures are a war secret, but it is obvious that that is where the oil will go.

The convoy distance from North Atlantic ports to England or Gibraltar is far less than from Gulf and Caribbean oil shipping ports, and tanker turnaround is one of the important keys to military operations abroad. And it's an open secret that the desire of the Army and Navy to load more oil at our northern ports is what persuaded WPB to authorize new pipeline construction.

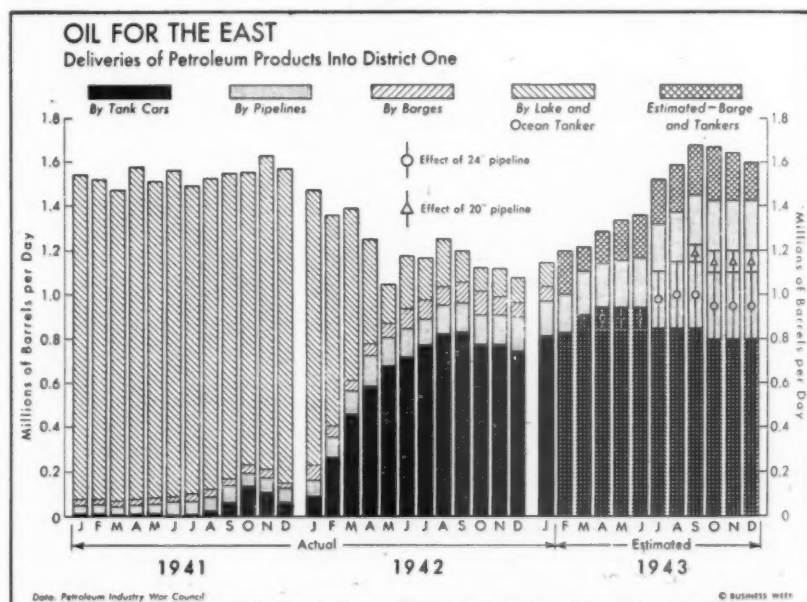
• **Hope Dashed**—The end of the heating season coincidental with completion

of the "Big Inch" crude line from Longview, Tex., to Norris City, Ill., raised hope for more liberal gasoline rations in the East Coast area, but this was dashed by OPA's decision coupling removal of the ban on pleasure driving with a cut in "A" coupon value to 1½ gal. a week.

Petroleum Administrator Harold Ickes insisted that gasoline consumption be kept close to recent levels not only to provide supplies for military takings but also to build up East Coast stocks for emergencies and particularly for next winter. Stocks of all products in the East are down below safe working levels, and skillful juggling of inbound shipping schedules is required to prevent local shortages.

• **"Big Inch" Felt**—Estimates are that deliveries of all petroleum products into the East Coast area will average around 1,600,000 bbl. a day the last half of this year. That is slightly more than average consumption during 1941 when, for the most part, there were plenty of tankers available. This is due entirely to new pipeline and barge construction, since the number of tank cars in the petroleum service may be even smaller than at present. The effect of the "Big Inch" is already being felt, increasing tank car deliveries by around 100,000 bbl. a day due to the shorter haul from Norris City. When it is in full operation to the Atlantic Coast it will carry 300,000 bbl. a day releasing tank cars for other movement.

By September the 20-inch products line will be in operation to Seymour, Ind., shortening the rail haul so as to increase tank car deliveries by 100,000



Flow of petroleum products to the East Coast is rapidly drawing ahead of last year, thanks to the fact that the new pipeline has cut the length of the

rail tank car haul. Soon the pipeline will be completed to tidewater, cutting the load on the tank cars as the February–December estimates show.



Coupled in the nation's impending food crisis are problems of agriculture, labor, and management. Needing a representative group to guide him through the coming storm, War Manpower Commissioner Paul V. Mc-

Nutt has appointed an advisory committee: (seated left to right) Frederick Crawford, president of the National Assn. of Manufacturers; McNutt; Edward O'Neal, chief of the American Farm Bureau Federation; A.F.L.'s

William Green; (standing) C.I.O.'s Philip Murray; Eric Johnston, head of the U.S. Chamber of Commerce; James Patton, National Farmers Union chieftain, and Albert Goss, National Grange master.

Food for All—But not too Much

Excitement of last few days gives rise to baseless talk of famine; flaws in distribution exaggerate difficulties. Butter, meat among shortest due to lend-lease and Army needs.

bbl. daily. If WPB approves completing the 20-inch to the coast, pipeline deliveries will be increased by another 235,000 bbl. daily and more tank cars will be freed, but there is no certainty that these tank cars will be kept in the oil movement.

• **Real Bottleneck**—A program of barge and towboat construction is now under way (page 20), but this is only a partial relief. No amount of new canal construction, such as across Florida or New Jersey, will provide the required barges and particularly the motive power, which is the real bottleneck in water shipment of oil.

Tanker deliveries to Atlantic ports this year will be negligible and confined to those small vessels suitable only for coastwise work. Since tankers used to provide 95 percent of all deliveries, it is obvious that the oil industry has caused a revolution in transportation since the start of the war. If it were not for off-shore military demands, the industry could meet all domestic demands in the East under a liberal rationing system from now on.

• **Third Pipeline**—Ickes is now talking about asking for still a third big pipeline from Texas to the East Coast, but if this is approved it could not be used for at least a year, and even then its purpose would be principally to speed products to the battlefronts and not for the relief of consumers.

Americans in the last few days have undergone the most pronounced food shortages in the modern history of the country. The abrupt, unheralded freezing of all fats and oils including butter, on top of the dearth of meat in metropolitan centers, compounded civilian fears. Yet there actually is no reason even to talk of famine.

• **Where Shortages Will Come**—Worst shortages will be in butter and cheese, with meats and canned goods running not far behind. But a checkup of estimated per capita supplies of even these "short" foods indicates that in most lines, 1943 supply will not be seriously below the average of the late 1930's.

In fact, a quick survey of the food market (see table) suggests that, on the basis of present estimates, the average American will be able to buy more grain products (except rice), poultry, milk, and potatoes than last year, but he will probably have to get along on smaller helpings of fish, sugar, coffee, cocoa, and eggs, and he will certainly think twice about how he uses his lim-

ited supplies of butter, meat, and canned goods.

• **The Butter Situation**—Families caught with little or no butter when the freeze was announced Sunday are having a foretaste of the most important shortage expected this year. Accustomed to using more than 16 lb. of butter a year, Americans are going to get along on a bare 13 lb. this year, mainly because the armed forces are scheduled to requisition about 16% of the output. Lend-lease will slice off another 5% if hospitals, especially in Russia, are to be allowed even a part of the supplies they are requesting. (So far, lend-lease buying has been very small, amounting to less than 1% of production.)

Cheese consigned to the domestic retail trade is to be slashed to about 66% of output because of heavy government buying. In this case, because the Englishman is in the habit of eating nearly three times as much cheese as the average American, the main drain on supplies comes from lend-lease purchases. When the pinch became serious a few

months ago, however, even lend-lease slashed its purchases and exports for the first two months of this year dropped to an average of 5,000,000 lb., compared with a monthly average of 26,000,000 lb. for 1942.

• **Slight Cut in Cheese Use**—Americans won't suffer seriously from reduced cheese rations, despite the export drain. Planned annual allowance for each person is more than 5½ lb., compared with consumption of 6½ lb. last year.

If last week's optimistic crop forecast is realized, there will be no shortage of milk, and present plans to hold civilian meat rations at more than 2 lb. a week can be carried out. Washington has already announced that last year's generally ample supply of milk will be maintained. Total 1942 civilian per capita consumption of fluid milk was around 370 lb., compared with a 1935-39 average of a little more than 340 lb. Present plans for 1943 will swell the allotment of each civilian to nearly 390 lb.

• **Small Towners Get a Break**—John Doe will eat more of his vegetables fresh this year, of course, because the government is going to take half of the pack, most of it for the armed forces. Lend-lease probably won't boost its requirements much above last year's levels when it required less than 3% of the supply. This is where the residents of great metropolitan centers are likely to suffer more than small town inhabitants who can turn their backyards into vegetable patches and the kitchen into a home cannery.

It is doubtful if truck gardeners this year can boost commercial crops of vege-



BUTTER PANIC

Without warning, the Office of Price Administration announced its freeze on sales of butter, margarine, and cooking fats—starting the wildest Sunday buying rush of the war. In New

York, crowds of butter-hungry shoppers (above) pushed into neighborhood stores—typical of similar scrambles for butter wherever stores were open. In Boston, a woman fainted in the jam and police found no less than seven pounds in her shopping bag.

tables for processing very much because of the record size of the 1942 harvest and, with a bigger take for the armed forces, it is expected that supplies for civilian consumption will drop 15% below last year's levels. But, despite the fact that the 1942 dry edible bean and pea crops were the largest on record, Dept. of Agriculture authorities believe

that the output this year will be upped. • **Size of the Gains**—In the case of beans, a favorite with lend-lease officials, more than 18,000,000 bags are likely to be harvested, compared with a 1935-39 average of a little more than 13,000,000. The dried pea crop is estimated at 6,700,000 bags, compared with only 3,400,000 last year. Almost a quarter of the output is earmarked for government requirements, much of it for lend-lease account.

The potato outlook, despite current shortages in numerous metropolitan centers, is good, according to the March crop report of the Dept. of Agriculture. Production is expected to be 14% ahead of last year and only slightly behind the 1943 goal.

• **Consumption Lower**—Current shortages are undoubtedly due to distribution problems rather than to any overall shortage. Per capita civilian consumption of potatoes has actually been running about 7% below the 1935-39 average, probably due to the ability of thousands of prospering war workers to buy more expensive vegetables. Since home military requirements account for the sole government purchases, supplies should be ample for all home demand.

Rationing of meat highlights one of the major food supply problems. With military officials buying heavily for both home and overseas demand, and with civilian consumption soaring with the income curve, supplies are bound to be increasingly tight.

• **Army Gets the Beef**—Demand varies according to the type of meat. The Army is a heavy buyer of beef and veal;

Where the Food Pinch Will Be Tightest

Here is a list of food items where, despite soaring farm production, increased purchases for the armed forces and for lend-lease are making the biggest inroads into civilian supplies:

		Production			Est. govt. requirements in 1943 as % of 1943 production*
		1935-39 Average	1941	1942	
Dairy products.....	Total milk equivalent, millions of lb.....	104,710	115,498	119,412	122,000
Butter.....	Millions of lb.....	2,170	2,268	2,159	2,270
Cheese.....	Millions of lb.....	699	956	1,118	1,050
Fluid milk & cream..	Millions of lb.....	44,147	46,900	49,200	(2)
Dried whole milk....	Millions of lb.....	19	46	60	100
Dried skim milk (for human consumption).	Millions of lb.....	243	366	562	675
Eggs.....	Millions of lb.....	5,003	5,744	6,630	7,500
Canned fruit (1).....	Millions of cases of 24 No. 24 cans.....	62.6	90.5	87.3	76.3
Canned vegetables (1) ..	Millions of cases of 24 No. 2 cans.....	115.2	210	211.1	192.1
Soups, baked beans, baby food.....	Millions of cases of 24 No. 2 cans.....	30.6	34.3	33.8
Dried fruit.....	Thousands of tons, dried.....	584.8	438.8	489.1	545
Dry beans.....	Millions of 100-lb. bags, cleaned.....	13.2	15.8	17.2	18.1
Dry peas.....	Millions of 100-lb. bags, cleaned.....	4.3	3.8	3.4	6.7
All meats.....	Millions of lb.....	16,169	19,504	21,918	23,214

* Military plus lend-lease purchases.

(1) Year's pack.

(2) Less than 3%.

lend-lease buys almost none. Huge purchases of pork are split more or less evenly between them.

Because of the record supply of feed grains and forage harvested last year, together with the current high level of livestock production, prospects are good for increasing total meat output at least 15% over 1942. But military and lend-lease requirements will amount to 30% of the anticipated total so a civilian must get along on around 125 lb. for the year, compared with an estimated demand of about 165 lb. Yet actual consumption averaged only a little more than 126 lb. a year between 1935 and 1939.

● **Beef to Be the Scarcer**—Beef and pork normally share the home market on about even terms, but, with the Army cutting steadily deeper into the beef supply, it is likely that civilians this year will consume more pork than beef, probably something like 57 lb. of beef and 62 lb. of pork.

Helping to fill the gap, besides such protein vegetables as soybeans, dried peas and beans, are eggs and poultry. The production of chickens in 1943 may jump 30% ahead of last year, and turkey output is likely to be up more than 10%. With lend-lease buying little or no poultry, and the Army only modest supplies, 1943 per capita supply of chickens and turkeys will run pretty close to 33 lb., compared with 26 lb. in 1942 and an average of about 21 lb. in 1935-39.

● **Not So Many Eggs**—The egg outlook is less rosy. Even if hens accept the laying speedup hoped for in 1943, the government expects to take at least 27% (original estimate was 30%), and each civilian may have to content himself with 300 eggs this year, compared with a supply of 317 a year ago. Lend-lease absorbs nearly two-thirds of the government purchases and ships them abroad in the form of dried powder which is easily distributed among badly bombed populations.

Despite the important shortage of red meats, it is unlikely that fish will play an important part as a substitute food. With thousands of coastal vessels and fishing boats drafted into naval service, the nation's fish catch last year dropped 22% below the 1941 level and was 14% below the 1935-39 average.

● **Drop of 23% in Fish Use**—Large government purchases of canned fish for lend-lease and military use (about 55% of total production) further reduced the limited supply on the market. On Sept. 30, 1942, about 60,000,000 lb. of the last salmon pack was released by the government and another 60,000,000 held in packers' warehouses as stocks for future release. The per capita consumption of fresh, frozen, and canned fish in 1942 was about 11 lb., which was 23% less than in 1941.

Complaints from the trade and the

public have already forced some changes in the food program. Nearly five million cases of evaporated milk are now moving out of government warehouses to meet the current civilian shortage. Government cheese purchases were slashed recently when an acute shortage threatened the domestic market, and goals are now being set for only three months at a time. A similar move in the egg market may be necessary if speculators—hoping for higher prices next winter—continue to buy heavily for cold storage.

● **Facts to Remember**—But a clear understanding of the supply situation makes it plain that some of the market flurries of the last few weeks have been due almost entirely to bad distribution. In other lines, the public has not yet become aware that rations are likely to dwindle rather than expand as long as the war lasts.

Despite the threat that the labor shortage will jeopardize the whole food program, farmers so far believe that they can meet the goals set for this year if weather conditions are favorable. This despite the fact that percentage is strongly against duplication of last year's extraordinarily favorable weather. The validity of their claim will be clearer when the next quarterly survey of the food situation comes along.

Food's Big Jolt

Point rationing restores buyer's market, and housewife once more cracks the whip at the retail counter

Some measure of competition is coming back in the scrappy food field, thanks to point rationing. Gone is the recent boom which enabled manufacturers and distributors to sell almost any kind of processed food (regardless of brand) by the case. The trade is up against the jolting realization that the seller's market has turned into a buyer's market, and that—within limits—the housewife once more holds the whip.

● **Competitive Incentive Gone**—It isn't merely the size of consumer hoards and the possibility of sporadic buyers' strikes that give the homemaker her renewed importance. In time these factors will be incidental. What really matters is that under point rationing, demand and supply are equalized, and the incentive for one housewife to outbid her neighbors in a speculator's market is lost.

Four major factors form the basis of the new competition in foods:

(1) Point values will pit one type of



To the nation's grocers, the complexity of OPA's point rationing system plus feminine caution and shrewdness in shopping are a gigantic headache. To keep rationed shopping from be-

coming a store bottleneck, Los Angeles grocers are setting up stamp booths (above) and are departmentalizing their stores to keep rationed and nonrationed goods segregated.

food against another, whereas money values previously were the deciding influence.

(2) Nonrationed foods can gain a definite edge over the rationed types.

(3) Brand preferences and names may be reshuffled, because every can of food will be sold sooner or later.

(4) Availability of product will no longer dictate the choice of grocers. Under rationing, all grocers have some kind of supply. Only when supplies are unbalanced will availability carry any weight.

• **Permanent Advantage Seen**—Certain classes of food processors are sure to gain a wartime advantage—mayhap a permanent increment—in this reshuffle. This is particularly true in the case of frozen foods and some dehydrated products (notably soup).

Heretofore frozen foods have never completely shaken the aura of luxury, while dehydrated soups only recently made any appreciable headway. But now that frozen foods sometimes have an edge in point values (BW—Mar. 6'43, p8) and dehydrated soups additionally have an edge in price, grocers and housewives alike are apt to get a new outlook. Dehydrated soups especially are catching the grocer's eye, for while the price is low (10¢), the profit margin is high (25% and up). One large food chain, for instance, is sending its men the following comparative data:

	CANNED Points per Pound Prepared Weight	DEHY- DRATED Points per Pound Prepared Weight
All soups	4.9	1 to 2

	CANNED Points per Pound Drained Weight	FROZEN Points per Pound Frozen Weight
Berries	18.3	13
Cherries	16.3	13
Peaches	16.0	13
Asparagus	16.8	13
Beans, Lima	19.2	13
Beans, Snap	16.1	13
Corn, Whole grain	16.3	13
Peas	20.0	13
Spinach	15.6	13

• **Heavier Advertising**—Sparked by Lip-ton's (in the dehydrated soup field) and Birdseye (in the frozen food field), this competitive situation is coming to its logical climax in heavier advertising. And the same hard-hitting story is being reechoed in the nonrationed food field where the makers of cereals (piced by Kellogg), gelatin desserts, and rice are

Here's How Rationing Affects the Grocer

Like bankers cautiously examining some new kind of money, housewives and grocers are attempting to pry into the mysteries of ration points. Throughout the nation, the same story repeats itself: Sales of processed foods are hard hit while homemakers are busy on the calculus of deriving the biggest supply from the least number of stamps.

More than likely, too, the innate shrewdness of women has suggested that if they wait long enough—that is, if they go on a buyer's strike—OPA will liberalize values to move goods.

For grocers, the situation is a nightmare. The longer housewives stall their buying, the bigger will be the rush at the end of the month. But meantime the grocer needs money to pay off his wholesaler. This need for moving merchandise to get cash was a spur to widespread "boot-legging." Harrassed grocers, with no more space in stockrooms or on shelves, would offer six cans of tomatoes—"and forget about those ration points, lady."

Aside from the uniform feminine reaction to play cautious, point rationing has produced local problems, trends, and—inevitably—evasions.

Richmond: Thrifty shoppers discovered the virtues of unrationed fresh grapefruit, started buying it by the case. Among rationed goods, the best movers were concentrated tomato sauce (good with spaghetti) and frozen foods.

Houston: Cereal sales grew so rapidly that grocers—never accustomed to large profits on these products—suddenly found them to be nifty money-makers because of turnover. Fancy processed items (strawberries, rhu-

barb, etc.) stood motionless on grocers' shelves.

Philadelphia: Skippers on ocean-going vessels unanimously cursed OPA for abolishing the petty racket of gypping the ship's owner. This is normally accomplished by assigning phony purchase prices to ships' stores, and turning in bills for more goods than actually were purchased. What with rationing and price-ceilings, the old gag is a goner.

Meantime, small butcher shops produced meat when supermarkets couldn't, thereby making dire inroads on the latter's customers.

Topeka: Topnotch grocers discontinued deliveries except on Saturday. The caliber of their delivery boys is such these days that they can't be trusted to collect ration coupons.

Kansas City: The Muehlebach Hotel, which serves 93,000 meals a month, hired a ration expert to keep the chef from getting ahead of his allotments of rationed food. A popular cafe threatened to serve catchup and chili sauce in paper cups after diners made off with the bottled condiments to save ration points. (Many restaurants and restaurant chains throughout the country—the Horn & Hardart Automats, for example—abandoned catchup altogether.)

Boston: Supermarket business fell 35%, but sales of fresh vegetables were practically at an alltime high. Many a grocer installed a dual system of cash registers: one for shoppers buying rationed goods; one for the line that moves fast.

Buffalo: Among rationed foods, only frozen fruits and vegetables had any buyers. As in many another community, shoppers figured that the big store was no better than the little one

when it couldn't cut-rate ration points. Result: A land office boom for delicatessens.

Chicago: Restaurant business jumped 20% to 25%. Now restaurateurs are wondering how they can feed all their customers.

Denver: Grocers grumbled that their patrons had such vast hoards of rationed goods that the sale of processed foods fell 85%. But trade in cereals and fresh vegetables was strong.

Los Angeles: Grocers began departmentalizing their shops to keep rationed goods from messing up the rest of the store. Hijackers appeared on the scene, robbing stores and trucks to supply an incipient black market. Sunkist gave food merchants blueprints for enlarging their produce departments, figuring that citrus fruits would get the center display.

Pittsburgh: City officials warned against a wave of gypping under butter and cheese rationing, for only 5% of the scales in food markets will correctly show fractions of an ounce. Processed foods rationing set off a flurry of vitamin advertising, greatly stimulated sales of gelatin and fresh produce.

Portland, Ore.: Finding that customers wouldn't spend ration points on canned juices, grocers sold them without collecting the proper tickets in order to raise cash. Meantime, housewives went on a buyer's strike.

New York: Claiming that penny-size boxes of raisins are a confection, grocers stocked up on them in an attempt to get around the rationing rules. The boom in baby foods (BW—Mar. 20'43, p40) got an additional spurt when adults showed appreciation of the baby point-values.

out to grab a bigger share of the market. In the fresh fruit field, Sunkist is tempting grocers to enlarge their produce departments to reap more quick cash at enviable prices (see table). Behind these efforts, new advertising and new copy slants are getting to be everyday affairs.

• **Goodwill at Stake**—This relatively favorable position of the nonrationed foods, plus heavy purchases of dehydrated soups and frozen foods, are forcing other food manufacturers to fight back. Not only brand names are at stake, but also grocer goodwill. For stocks that pile up on shelves deprive the retailer of the cash he always needs to settle up with the wholesaler.

So far the first impulse of the least favored group has been to beg OPA to reduce point values as quickly as possible. This OPA already has done for dried and dehydrated prunes and raisins, as well as edible dry beans, peas, and lentils. Dates and figs, not hermetically sealed, have been removed from rationing altogether.

• **Full Relief Impossible**—But OPA can't grant a full measure of relief. Even at greatly reduced point values, some processed foods may not move rapidly enough to suit processors and grocers. In such instances, the manufacturers must either start a bangup advertising campaign, or reduce money prices along with point "prices." If neither of these stimulants is effective, you can be sure that the grocer will push the goods out through the black market—that is, he'll sell without collecting ration points.

Aside from such processor competition, the battle between the various classes of stores is beginning all over again. In the first round, the big stores have taken a decided licking from the delicatessens and other smaller shops. For the big stores' emphasis on self-service is turning out to be a boomerang. Lack of clerks means that the housewife has no personal guide in figuring out the mysteries of points or in determining whether her favorite brands are still in stock. And the lineup at the cash register has become so slow that many a shopper considers her nerves more valuable than supermarket prices.

• **Strategy Set**—The big food outlets have expected this drubbing. But they also have their strategy well set. As soon as the first fuss over rationing dies down, they will plug cheaper prices all the harder in order to retrieve business. In the interim, they are experimenting with new store layouts. One idea is to separate the rationed foods from the unrationed types, so that slow, reflective patrons won't gum up the whole store. Another idea is to have two types of cashiers—one for shoppers buying rationed goods, one for the rest of the trade.

And the big store in time will have two other advantages over the little fellow: (1) experienced buyers who can

shop around for a balanced list of rationed items, and (2) the cash to keep above water when stocks move slowly.

• **Relies on Wholesaler**—On these scores, the little fellow has no comeback. He must rely on his wholesaler to send him correctly proportioned supplies. If the wholesaler misses the target, the little fellow's business drops and he runs short of ready cash. Black marketing is his only way out.

Economically healthy, the recurrence of competition in foods is, however, the cause of major concern among trade leaders. For in these unusual days, competition is apt to create strange reverberations in WPB.

• **Remember Soup Squabble**—What the trade fears is that leaders in new food lines will convince WPB that their booming business should automatically entitle them to scarce materials, usually to the exclusion of competitive lines. The trade had a foretaste of this situation a year ago when condensed soups got some tins, but the ready-to-eat variety went begging.

Now the big fear is that the dehydrated soup manufacturers, bulging with confidence, will attempt to repeat. And while nobody expects that the canning industry will take a complete licking, dehydrated soup advertisements are being scanned carefully to measure any increase in the telltale note of confidence.

Riding the Storm

CMP weathers its first organized opposition, but auto men win some changes and a delay for carbon steel.

The Controlled Materials Plan appeared this week to have weathered its first burst of substantial and more or less open opposition. With the plan due to go into effect Apr. 1 and with their first CMP allotments just reaching their desks, auto executives began to get sort of panicky in mid-March over what seemed a prospect that their material deliveries under CMP were going to get hopelessly balled up, that their production would drop. Some of them were talking about laying off thousands of men, cutting output in half.

• **Procedural Changes**—The Automotive Council for War Production stormed into Washington last week demanding to know what was what. They held conferences with J. A. Krug and Harold Boeschstein of WPB. A few changes were introduced into CMP procedures as a result; some obscure points were explained.

The auto people were not attacking CMP as such. But they did have specific points of complaint.

Most important of their objections

RATIONING, THE LEVELER

Rationing, which is designed to give everybody equal shares, inevitably hits consumers with unequal impact because of wide variations in the consumption habits of different areas and classes. This obvious fact was underscored this week by a report from A. C. Nielsen Co., market research organization, on various market shifts which may be anticipated as a result of rationing.

Of eight canned foods now under rationing—soup, peaches, pineapple, tomato juice, orange juice, grapefruit juice, pineapple juice, and miscellaneous fruit juices—per capita consumption shows the following regional fluctuations when compared with an index number of 100 for the nation as a whole:

New England.....	142
Middle Atlantic.....	117
East Central.....	108
West Central.....	77
Southeast.....	52
Southwest.....	61
Pacific Coast.....	136
Metropolitan New York.....	152
Metropolitan Chicago.....	151

It is apparent from these data that rural areas, which heretofore have accounted for higher-than-average consumption of ingredient items (flour, fresh fruits, etc.), are now going to be entitled to a larger-than-usual share of processed, canned foods.

On an income classification basis, those at the lower end of the scale will make out better—comparatively at least. Consumption of the eight canned goods prior to rationing was rated by Nielsen as follows (national average equals 100):

Upper income.....	214
Middle income.....	109
Low income.....	46

With rationing cutting an ever wider swath, the big stores are beginning to make a comeback, thanks to the wider range of merchandise choices which they afford. This is evident in the following Nielsen tabulation of grocery store sales:

% Gain from Jan.-Mar. to Aug.-Sept., 1942	
Total U. S.....	21
Chains.....	13
Large independents.....	18
Medium independents.....	25
Small independents.....	39

% Gain from Aug.-Sept., 1942, to Dec.-Jan., 1942-43	
Total U. S.....	9
Chains.....	11
Large independents.....	11
Medium independents.....	9
Small independents.....	7

related to delays in the issuance of allotments. A survey made by the council revealed that at mid-March nearly a third of the firms in the Detroit area had not yet received their allotments. Subcontractors were, of course, in even worse shape. This, they feared, would interfere seriously with placement of material orders for April and May delivery—particularly orders for steel.

• **Postponing Carbon Steel**—WPB admits allotments are late, thinks delays are inescapable in a new plan. Third quarter allotments will be late too. WPB however expects to overcome much of the immediate trouble by postponing until Apr. 15 the application of CMP to deliveries of carbon steel.

On alloy steels, copper, and aluminum, WPB keeps a close enough watch over shipments so that the delays shouldn't cause serious trouble. WPB can insure, for instance, that an order placed under the Production Requirements Plan by an important firm not under CMP during the transitional second quarter isn't put at the bottom of the pile.

• **Push Claimant Agencies**—On the big volume of carbon steel no such close control is possible, but by Apr. 15, the steel mills should have all the CMP allotments and PRP priority orders in front of them, and this should enable them to schedule their runs intelligently.

Further to smooth out the timing problem, WPB has promised to press the claimant agencies to make allotments now for the third and fourth quarters of this year and the first quarter of 1944 on key contracts. CMP regulations permit claimant agencies to allocate one, two, and three quarters ahead up to 80%, 60%, and 40%, respectively, of their current quarter's allotment.

• **Unbalanced Allotments**—The second complaint of the auto men is that some companies—about 10%—are getting unbalanced allotments—that is, they are getting, say, all the steel they need but only part of the aluminum. WPB explained that sometimes, when this happens, it means that the claimant agency suspects the manufacturer of having concealed inventories and is trying to force them out.

More often, it reflects an actual unbalance in the supply of materials. Admittedly, in such a situation, the theoretically correct thing to do is to cut the production schedule to match the scarcest material, redistribute the other materials. It was thought, however, that if the schedules were maintained manufacturers might exert their ingenuity and find some way of getting along with less material. The trouble with a perfect allotment scheme is that it takes all the pressure off everybody; WPB was trying to restore some of the pressure. It admits, however, that the method perhaps can't be wisely applied



Such huge river cargoes as 30-barge tows of the Mississippi Valley Barge Line Co. (above) were common before the war. But demands for speed have swung much barge business to the railroads. Getting ready for a swing back again, a superdredge (right) is ripping 3,000 cu. yd. of silt an hour out of a half-mile land plug barring the new route of the Intracoastal Canal bypassing shallow Lake Pontchartrain and running between New Orleans and Michoud, La.



to the tightly organized auto industry.

• **Aluminum Castings Short**—A further factor in unbalanced allotments was a temporary scarcity of aluminum castings at the time the allotments were made. Rather than cut production schedules, the agencies preferred to tolerate unbalance, correcting it later when—as has now happened—the shortage was cleared up by an arrangement with the British.

Most of the auto men were satisfied with the explanation, though some retained a suspicion that the claimant agencies had simply slumped into PRP methods of allocation.

• **Split Ratings Hit**—WPB had no apologies when the visitors complained of split ratings—under which a firm will get an AA-1 on, say, 90% of its uncontrolled materials and an AA-3 on the other 10%. This, it was explained, arose out of the basic assumption of CMP—that if production schedules are held to the level permitted by the supply of the three controlled materials, there will be enough of the uncontrolled materials.

This, said WPB, is still an assumption. It might be wrong. If it is, we don't want to end up with full deliveries of some items, practically none of others. We'd rather have 90% of everything. The split rating insures that any scarcities which show up will be spread over the tail end of all production.

Inland Freight Hit

Operators of barges and towboats, passed up by the war boom in shipping, hope brighter days may be ahead.

Activity on canals and inland waterways was popping all over the map last week. In Washington, the House Rivers and Harbors Committee approved a bill to build across New Jersey a 32-mile canal, connecting the Delaware River with the ocean near New York. The committee also decided to consider deepening the present channel of the Lakes-to-Gulf waterway. Advocates of a Florida canal were slugging it out with opponents but making no apparent progress.

• **Labor Shortage Threatens**—The War Manpower Commission, meanwhile, warned that the tightening labor situation in inland waterway transportation threatens to become critical, reminded draft boards of the need for occupational deferment for these workers.

At New Orleans, a superdredge was cutting out the 2,400-ft. land plug to complete the new route (started for the Higgins shipyard and abandoned when the Higgins contract was canceled) of

THIS ISN'T NECESSARY

"It's some sort of figuring machine--I picked it up at a firemen's carnival!"



YOU CAN RENT COMPTOMETER EQUIPMENT!

- Better turn that contraption in to the scrap drive, gentlemen, and make a quick telephone call to your local Comptometer Co. representative.
- Ask him to explain how you can *rent* Comptometer adding-calculating machines for limited periods of time.
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For example, tracings!—up to 25 clear, sharp reproductions on linen can be made in an hour from the pencil drawing. On paper work of all kinds—printed, typed, drawn or photographed, ELECTRO-COPYIST is doing the fast, error-proof copying that saves clerk and stenographer help. Yet it's so simple, anyone can work it . . . and there's no darkroom, no lens, no focussing necessary.

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the Intracoastal Canal from the Industrial Canal to bypass shallow, fickle Lake Ponchartrain with a 12-ft. channel.

• **New Equipment Rushed**—From Pittsburgh to the Gulf of Mexico and up the coast to Ocean City, N. J., boat-yards were rushing towboats and barges that can move enough southwestern petroleum to the industrial East (page 14), no matter how many Axis submarines lurk along the shiplanes.

The railroad backlash during the World War shifted freight to the inland waters and sired waterway transportation as it exists today. Through 20 years, more than \$50,000,000 was invested in floating equipment and terminal facilities by carriers on the Mississippi River system reporting to the Interstate Commerce Commission. There are about 160 regulated carriers on the Mississippi, its tributaries, and connecting waterways. These include 26 common carriers which operate about 1,350 vessels.

• **War Boom Delayed**—With the outbreak of this war, well-equipped rivermen expectantly awaited their call to carry record tonnages. They are still waiting. Thus far, the rails have met all emergencies. New barge and towboat construction, in the first two years of hostilities, fell to less than in normal times for lack of materials. Bargemen actually have lost traffic, but not hope. But the eastern oil shortage looks like the bargemen's savior.

Jointly fostered by the Army, Defense Plant Corp., and the Office of Defense Transportation is a program for building flotillas of towboats and barges. This includes 21 steel-hulled steamboats for river traffic, and 100 steel-hulled diesel tugboats for the Gulf and Atlantic Intra-

coastal waterways. They are scheduled for service by September or October, having been delayed in getting diesel engines.

• **Barges Being Built**—Ready about the same time will be 500 wooden barges of 6,000-bbl. capacity to carry residual oils (the only petroleum product that can be safely carried in wood). Of these 170 will be used in the Gulf Intracoastal from Texas to Florida, 50 in the Atlantic Intracoastal north from Florida, 240 from Texas to the Cairo, Ill., pipeline terminal via the Intracoastal and Mississippi.

For lighter oils, the government's Inland Waterways Corp. is converting 122 all-steel, dry-freight barges into tank barges of 2,000-ton average capacity by caulking and lining.

• **Oil Movement Increased**—The barge people do not relish losing their best steel cargo craft, but they welcome the opportunity to dip into the wartime gravy boat. The first two months of 1943 showed an average increase of about 150,000 bbl. of fuel oil and gasoline moved daily.

This added volume comes from Texas and Louisiana by Gulf Intracoastal to Carrabelle, Fla., where it is piped to Jacksonville and transhipped for Atlantic Intracoastal barging to northern points. Upstream movement of petroleum products on the rivers at Pittsburgh increased an estimated 8% last year. WMC estimates that additional daily eastward movement by all barge lines would reach 100,000 bbl. before 1943's end.

• **The ODT's Program**—Before war's depression hit the rivers, tows on the Mississippi frequently contained from



FOR LOCAL USE

Because railroad oil tank cars are forbidden under an Office of Defense Transportation edict to haul within a 100-mile radius of terminals, the gap is being bridged by large capacity tank trailers. Under ODT authorization, the Heil Co., Milwaukee, Wis., has produced 1,092, each with a capacity of 4,200 gallons, since last December, many of them in service in

the Middle West bearing the insignias of such firms as the Olson Transportation Co. (above), Green Bay, Wis. Truckers principally engaged in bulk handling of oil products will absorb most of the trailers, with some going to freight haulers who have recently entered the field. WPB automotive officials agree that the use of 300 trailers for short hauls in the Midwest will release about 1,500 rail tank cars for the long pull to the East.



It took 146,000 Sylvania Fluorescent Lamps to light precision bomber production at Willow Run.

"ONE OUT OF FOUR SHALL GO TO WAR"

● That's an order from Mary.

She's the Lamp Warden — does her bit by seeing to it that lamp bulbs are turned off when not in use. Sensible at any time, it's important to the war effort now.

Because it takes lamp bulbs, by the hundred millions, to light our Victory-bent war plants. Then, too, each bulb saved saves tungsten, vitally needed for cutting tools, aircraft engines,

armor-piercing shells, and countless other uses.

By making three bulbs do the work of four, you help assure lamp bulbs for war plants and conserve our tungsten stock pile. And there will be plenty to go round for good vision, safety and efficient work.

Appoint a Lamp Warden like Mary. Use only the bulbs you actually need, and use them only *when* and *where* they are needed. Let one out of four go to war!

SYLVANIA

ELECTRIC PRODUCTS INC.

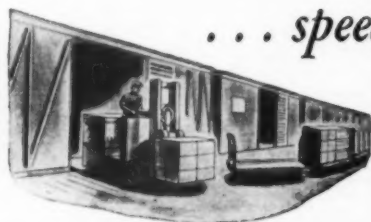
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FORK TRUCK—"TRACKLESS TRAIN" SYSTEM



... speeds receiving

When materials move over long distances the fork truck—"Trackless Train" is the most efficient low cost handling system.

The fork truck handles the unloading of freight cars—depositing skid loads on waiting trailers.

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When trailers are loaded, a tractor hauls the train to its destination. The tractor being a separate unit works continuously never idle for loading or unloading. And as the "Trackless Train" has no fixed path it may travel anywhere that necessity dictates.



... simplifies warehousing

Upon the train's arrival at its destination the tractor is uncoupled and sent on its way. A fork truck removes the pallet loads from the trailers and stacks them to ceiling heights.

For additional information on the fork truck—"Trackless Train" system of materials movement, request the Mercury Reference Catalog. No obligation.

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15 to 20 barges but averaged from 8 to 10. Today, average tows are smaller. Barge lines have plenty of equipment to move a much greater tonnage than they are handling. But when the oil tank barges are ready and the big movement really starts, this comfortable condition may not prevail.

To make the most of all barges and towboats, the ODT—with Dept. of Justice blessing—last month authorized the five biggest lines on the Mississippi system to tow barges or other craft for one another. These five control 800 or 900 barges, constituting about 80% of the common carrier tonnage of the inland waterways. The order does not authorize the barge lines to join in making rates or towage charges, however, or does it affect the liability of carriers for loss or damage to property being carried.

• **'Three Years' Figures**—Statistics on water-borne, inland freight are sketchy and spotty because censorship has clamped down at some points and not at others. Inland Waterways Corp. (Federal Barge Lines) is a fair sample for the waters it plies. Its five divisions show the following tonnages in the past three years:

	1940	1941	1942
Lower Mississippi...	1,589,755	1,706,194	1,454,832
Upper Mississippi...	500,746	681,296	724,060
Illinois River.....	413,635	563,111	599,157
Missouri River.....	65,067	112,169	72,901
Warrior River.....	382,970	284,844	220,293

Total (single counts*) 2,287,154 2,567,030 2,260,697

* Tonnage handled by more than one division counted only once.

The F.B.L.'s Mississippi system as a whole lost 10.6% in 1942 compared with 1941, and the Warrior system 22.6%. Because manufactured products are predominantly munitions, and in a hurry, the slowpoke barges get little of them.

• **Further Drops Feared**—The more optimistic operators are putting the heat on Washington to get war traffic, but the realists expect barge tonnage to keep on declining at a rate comparable with the decline in nonwar production. Actually, the war production program is yielding a little more tonnage than it yielded a year ago, but not enough to compensate for the loss of civilian business.

All of this adds up to accentuating a situation that always has plagued inland water carriers—imbalance of traffic upstream and downstream, eastbound and westbound. Raw materials, such as scrap metal, sulphur, salt, and petroleum, naturally move north and east by low-cost water hauls, but manufactured products tend to move south and west by rail because it is faster.

• **Rails Take Standby**—In 1941, upriver tonnage was 69% of the total, in 1942 it was 70%, and the trend continues. Downbound steel from Pittsburgh, Chicago, and St. Louis, a peacetime standby of the waterways, is moving in ever



*Between Him and
the deep blue sea*

... only a few micro-inches

Our fighting men depend with their lives on the micro-inch perfection (one millionth of an inch) and unfailing strength of many of the vital parts of our planes, ships and tanks. American industry is able to make these essential parts with unprecedented precision because it is experienced... skilled in metallurgy... practiced in research... creative in engineering design.

Today McQuay-Norris is able to contribute broadly to the war effort due to its

thirty-three years' experience in the manufacture of precision automotive and other industrial parts. We have applied our metallurgical knowledge to wartime problems. We have expanded many-fold in plant and personnel and are now one of the world's largest producers of critical war products.

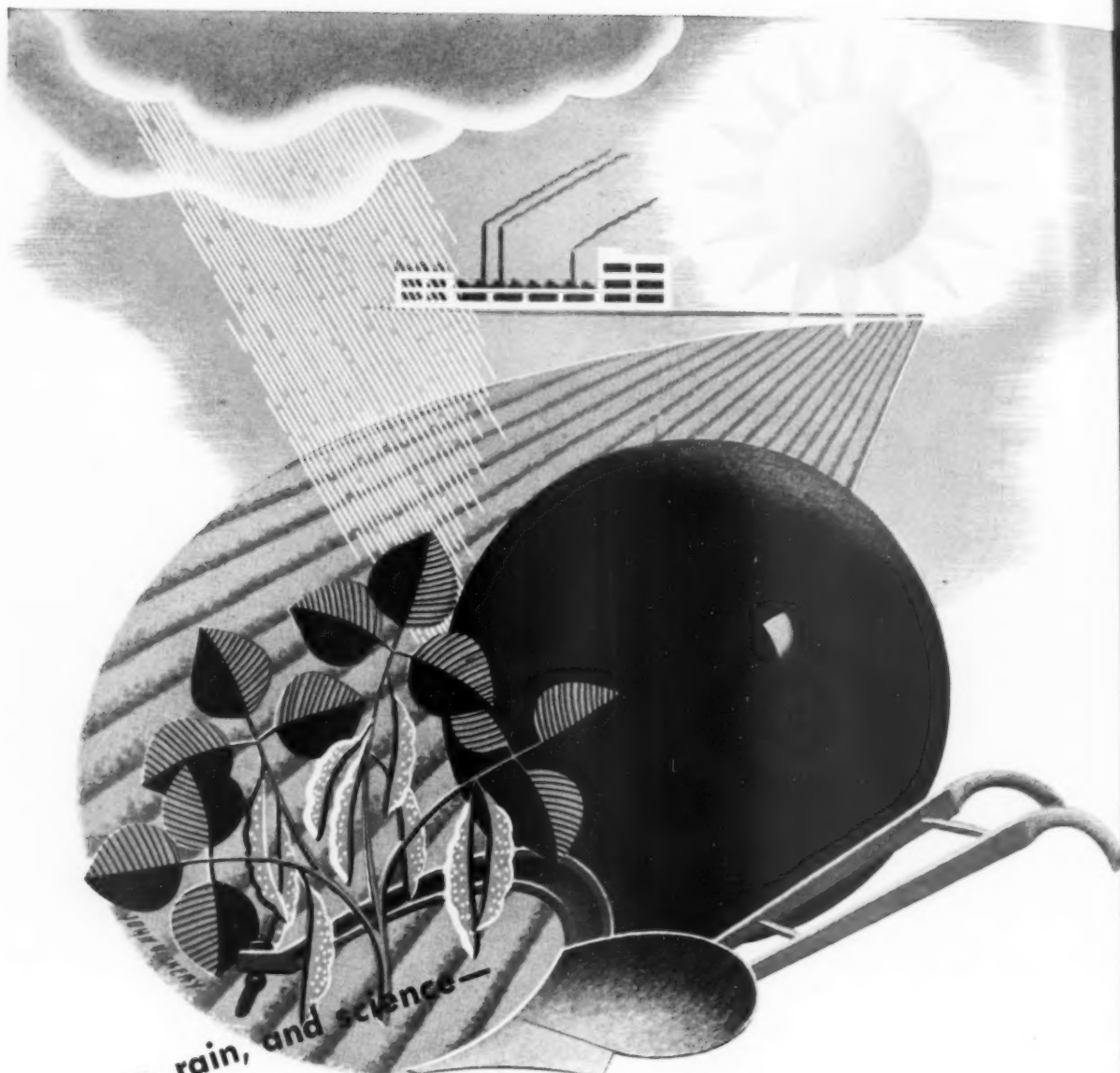
Doing our job well today will enable us to contribute more importantly to peacetime industry in the post-war era.

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From sun, rain, and science—

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CHEMURGIC RUBBER • INDUSTRIAL
PLASTICS • INDUSTRIAL CHEMICALS
CHEMICAL COLORS • SYNTHETIC RESINS



The sun, beating down on limitless acres of bountiful American soil . . . the rain, quickening to life the seeds of easily grown and harvested plants . . . the "know-how" of RCI chemists, skilled in juggling the complex formulae of synthetic compounds—from these wholly native elements has come new, timely and practical relief for America's rubber problem . . . Agripol, the chemurgic synthetic rubber. In fact, Agripol, in scores of industrial applications, is even better than natural rubber—

more resistant to oil and heat, less susceptible to weathering! Already being produced in volume, and capable of being fabricated with existing equipment of rubber goods manufacturers, Agripol is obviously a vitally important material of war. RCI presents it proudly as another contribution to America's victory program.

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greater tonnages to Gulf shipyards—but by rail—the water tonnage decreasing more than 60% between January, 1941, and March, 1942.

The yards never have been able to build sufficient inventories, and they have no incentive to specify river delivery since no matter how the steel moves they must pay the Pittsburgh delivered price plus rail freight. Instead of welcoming the freight savings, steel companies do not reach for it—perhaps to avoid annoying their railroad friends and to keep the basing-point system out of undue prominence. One steel company, however, reports it is arranging production schedules to permit shipping by water several thousand tons of ship-building steel.

• **Coal Shipments Rise**—One bright spot in the picture is the increasing water movement of coal. Three large coal carriers on the Mississippi River system handled almost 8,000,000 tons in the first nine months of 1942—an increase of 28%.

The vastly greater carrying capacity of barges over railroad cars is being used as an argument by the bargemen in Washington, but behind their hands some of them admit that this is often a drawback. Some plants lack storage for a bargeload, and the rails can space out deliveries. War plants are invariably on rail lines, but many are off the waterfront. Hence barge-borne shipments to these require short-haul rail or truck moves.

• **Inventory Control's Effect**—Another factor that currently works against inland transport is inventory control. Goods in transit are in inventory, and water shipment is slower than other carriers. Reports from river cities indicate that as control becomes more stringent, companies that could easily ship by water are willing to pay the extra cost of rail shipment to hold down total inventories and boost working inventories.

Eight barge lines operate through New Orleans. On the Mississippi and Ohio Rivers: F.B.L.; Mississippi Valley Barge Line Co., and its subsidiary, Campbell Transportation Co., American Barge Line Co., Union Barge Lines Corp. On the Intracoastal Canal, from Texas to Florida: Coyle Lines and River Terminals Corp.; from Beaumont, Tex., to New Orleans, Red River Barge Line.

• **The Lost Cargoes**—These lines report appreciable decreases in 1942 tonnage. They have increased their volume of sulphur, petroleum products, and paper carried north and east but have felt big decreases in coffee, sugar, provisions, coal, machinery, and commodities normally carried in import and export trade. Principal southbound loadings are steel, fabricated materials, grain and flour, and coal. Halted shipments of grain for export have been a major factor in reducing downstream traffic.

At Pittsburgh, Union Barge estimates



Buell Dust Recovery Systems help put it there

High Explosives are "booming" these days. America's arsenals are turning out astronomical quantities of bombs, shells and torpedoes...every one with a deadlier-than-ever "boom" for our enemies.

Sulphuric acid is important in the manufacture of explosives, but absolute purity of the acid is essential. Buell Dust Recovery Systems are used in conjunction with the contact method of making sulphuric acid because their high efficiency in removing contaminating flue dust from the sulphur dioxide gas assures purity in the finished product.

This is just one of many ways in which versatile Buell Dust Recovery Systems are helping industry achieve its war production goals by preventing contamination and salvaging critical materials for re-use. The van Tongeren "shave-off"—an ingenious design feature found only

in Buell cyclones—insures exceptionally high collection efficiency, low operating cost and long life. Buell cyclones have no moving parts and require little or no maintenance or attention.

Buell Dust Recovery Systems easily handle high temperature gases, and can be installed for any desired capacity from 300 c.f.m. up.

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60 Wall Tower, New York
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Factual
28 pg. book.
Write for
Bulletin B-43.



BUY WAR BONDS AND MAKE THE AXIS BITE THE DUST

SUBSTITUTE FOR MUSCLE

**Globe Oil - Hydraulic Lifts
Solve Manpower Problems**

● Foot-control-
led Globe Plat-
form Lift
speeds ma-
chine feeding.



Let a Globe Oil-Hydraulic Platform Lift do the heavy lifting in your plant . . . on your production line . . . at your loading dock . . . wherever women or older workers are doing your war-time job. Smooth, husky oil-hydraulic lifting power, at finger-tip control, will reduce fatigue, prevent strain, insure speedy handling. For illustrated bulletins on Globe Lifts, write Globe Hoist Company, Queen & Mermaid La., Philadelphia.

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HOOPERWOOD COTTON DUCK

Since 1800 (through six wars) the HOOPER name has symbolized highest quality in Cotton Duck and other Heavy Cotton Fabrics, Paper Mill Dryer Felts, Filter Cloth, Rope and Sash Cord

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its business up about 10%; American Barge reports a slight improvement; Campbell is about holding its own. Major increases in upstream traffic are scrap, bauxite, sulphur, and fluorspar. Some coal for steel mills is coming by river from around Huntington, W. Va. A substantial volume of downriver cement from Ohio River points for the Gulf actually has been diverted from the rails.

● **Tennessee River Gains**—Brightest area in the inland waterways picture is the Tennessee River and its tributaries. Its favorable showing comes because it has been developed for real usefulness only since Tennessee Valley Authority dams began going up, and its volume in 1942 was still being measured in ton-miles to make the figures look impressive.

Much of the traffic is local, such as coal from the East Tennessee fields to war plants on the river. But large ton-nages of grain move from St. Louis and other Mississippi river points to Chattanooga, and pig iron moves from Alabama to Midwest steel mills.

● **Expansions This Year**—At 180 million ton-miles in 1942, traffic volume on the Tennessee is 400% of six years ago. This spring TVA will start construction of four public freight terminals, to be ready during 1943, at Knoxville and Chattanooga, Tenn., at Gunterville and Decatur, Ala.

Kaiser's Gamble

In taking over Brewster Aeronautical, the shipbuilding wizard puts his chips on a long shot in the stretch.

Whether he is a miracle man or not, anybody who will go to work on a jinx in full view of the public must be called sporting. Thus, regardless of other possible epithets, shipbuilder Henry Kaiser earned a checkered-vest middle name last week when he took over the Brewster Aeronautical Corp.

● **Navy Seizure Failed**—In the book of Sen. Harry S. Truman's war investigating committee, Brewster is "one of the poorest" aircraft producers in the country. Production figures must remain confidential, but they are amazingly low.

Brewster's three plants, in the New York vicinity, were taken over by the Navy last April because of alleged inefficiency (BW—Apr. 25 '42, p. 8), and a new management was installed. The extent to which this management, physical conditions, the Navy, and the War Production Board are to blame for the second alleged production failure would be difficult to determine accurately.

● **A Serious Situation**—The latest failure to produce at a normal rate is more



Aircraft makers the nation over watch with interest to see if Henry Kaiser winds up behind the eight-ball by accepting control of the jinxed Brewster plane plants, or whether his "miracle touch" will rocket production.

serious than it was before. In addition to the urgently needed SB2A dive bombers in Brewster's works, the company is also tooling up to produce the new 2,000-hp. Vought shipboard fighter F4U.

Meanwhile, the Navy is having bad luck with dive bomber production. Curtiss-Wright was hauled over the coals recently for being slow with another diver, the SB2C-1. So the Navy is in a hurry to get Vought fighters which outclass Japanese fighters with plenty of speed, altitude, fire power, armor, and range. Vought, Goodyear, and probably other producers are turning out F4U's, but Brewster has delivered none.

● **Transition to Aircraft**—Kaiser first got into aircraft by going to Washington last year and appealing to the public through the press and over the heads of the generals. As a result, the Army gave him a contract to build three experimental air cargo behemoths on the West Coast.

A fortnight ago he saw an opening and stepped in to purchase Fleetwings, Inc. (BW—Mar. 13 '43, p. 107), a pioneer in substituting stainless steel for duralumin (aluminum alloy) in aircraft production.

● **No Records Threatened**—Now Kaiser dominates the Brewster picture, and all credit will be heaped on him if he succeeds. Nevertheless, the shipbuilder probably will threaten no aircraft production records. At least one producer renowned for speed already has turned out airplane poundage at six times Brewster's rate, with approximately the same manpower.

Industry jealousies that followed Kaiser's Army contract are not likely to impede his new venture, but he will have other headaches to nurse. Fore-

20,001 Businesses

THE INTERNATIONAL HARVESTER COMPANY is a big business.

But it began in a one-room farm blacksmith shop, 112 years ago. Thousands of other American enterprises, from equally humble beginnings, have grown to national scope. That kind of growth has been typically American. We hope it will always be so.

Our company did not become a big business without receiving help from others and giving help to others. No American business does. For our American business system is like a town. A householder who earns his living by selling clothing will buy his groceries from one neighbor, his shoes from another, his coal from still another, his insurance and his newspapers from others. So any business depends upon many other businesses for things which it needs, but cannot or does not make itself.

Every business, like every householder, operates both as a buyer and as a seller.

None Can Stand Alone

There is no business so big that it can operate without the help of other businesses. Indeed, the larger the business the more help it requires from others and the more help others receive from it.

International Harvester buys an almost infinite number of things from thousands of other companies, the vast majority of which are small businesses. We buy raw materials, supplies, finished and semi-finished parts and sub-assemblies, as well as services of all kinds. These companies which sell to us to fill our orders, buy in turn from many others.

Checking up, we have found that in the year before our country entered the war, we bought from more than 10,000 different businesses, most of them small. Our purchases during that year of 1941 amounted to just under \$200,000,000.

During 1942, after we had entered on war production, we added almost 1,000 new companies to the list of those from whom we buy. During 1943 we will add more.

Teamwork of Infinite Variety

These businesses from which we buy are in every state of the Union. Some have been operating for a long time, others came into being to produce special products needed for the war. To help them help us get out more war production and get it out faster, we have given many of them engineering and manufacturing assistance, have helped some to enlarge their facilities.

Our war orders, in other words, have not excluded little business from war work, but have very definitely brought more little businesses into war work.

Nor do our relationships with small businesses end with those who sell us things for our production. The civilian products we manufacture are sold by our dealers in the United States, to farmers, motor truck operators, construction companies and other users. There are 10,000 independent merchants who comprise this group handling our products.

Just as we have tried to assist, where necessary, the smaller manufacturers who are associated with us in pro-

duction, so, too, we have tried to help our dealers maintain their position during the war, despite shortages of new machines to sell. We have helped them arrange their activities so that they may be able to operate successfully on the basis of selling service and service parts. We have procured and trained service mechanics for dealers, to replace those who have entered the armed services. We have halted the sale of new farm machines through our company's relatively few retail outlets and distributed that business among adjacent dealers so that they might have the maximum possible volume of sales.

To sum up, we are a customer of more than 10,000 different businesses, and we market our products through more than 10,000 other businesses.

Thus, in our operation on a national scale, 20,000 businesses look to us either as customers or as suppliers of merchandise.

We mention these facts about the relationship between our company and 20,000 smaller businesses because it has been said by some that big business has tried to take advantage of the war to drive little businesses out of existence. We believe the facts prove that the contrary is true.

A CENTER for Responsibility

Our company has been assigned the responsibility for handling many large war orders of a type which must be handled by a large company in order to obtain the speedy production essential to the war program. Only a large company can handle orders of this kind and size—only a company with a large organization, experienced, versatile, accustomed to coordinating the facilities and abilities of many companies and able to direct this united effort for the production of new war products as rapidly as possible.

We have done our utmost to bring the maximum number of smaller companies into the filling of those orders. We need their help, they need ours. Through cooperation between us, war production is speeded up.

Having long adhered to a policy in support of small business, Harvester restates that policy in the light of present conditions:

We want little business to survive the war. We recognize an obligation to do our share to see that it does. We know full well that big business can't survive without little business. The same economic forces that would strangle the one, would, in time, kill the other.

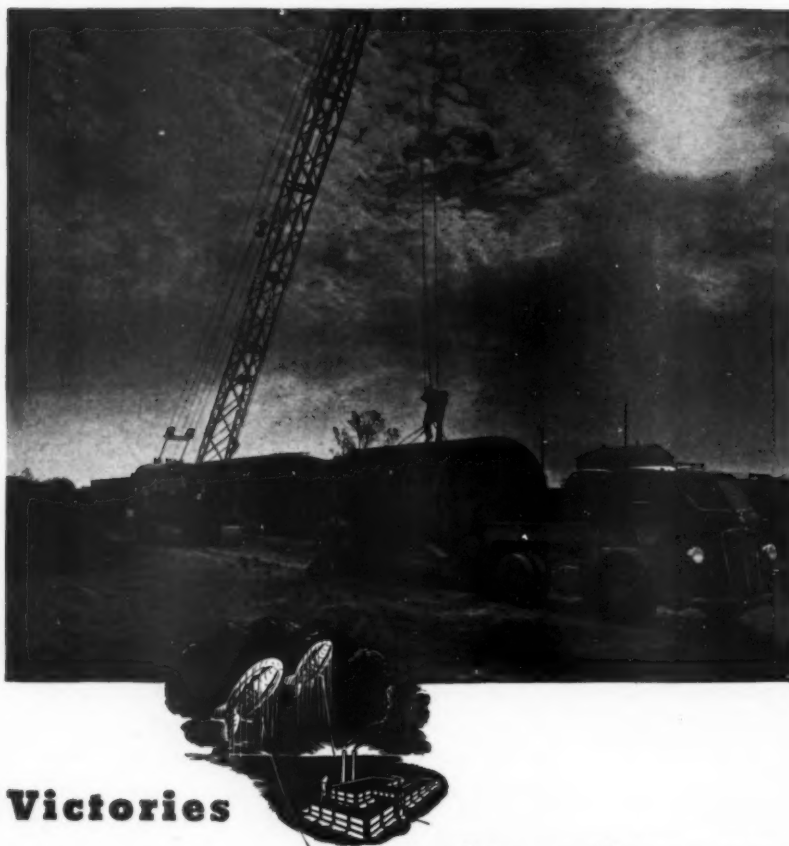
We know that America's economy cannot be healthy, cannot provide employment for workers or good products at low prices for customers, unless small business, medium-sized business and big business are all functioning, each at the job it can do best.

America, after the war, will need them all.

Fowler McCormick
President

INTERNATIONAL HARVESTER COMPANY, CHICAGO, ILLINOIS

INTERNATIONAL HARVESTER



Victories are won . . . after hours

Urgency rarely makes a distinction between night and day. Like the fighting forces, war industries must use the moment at hand for the job at hand. The work of a late shift crew, the short cut discovered after hours, the output of a machine that never seems to pause—*any of these may turn the tide in battle.*

Time is the one commodity that can be hoarded by expending. If we can extract still more from bench, implement or plant, our country expects us to do so. If we can deliver more weapons by con-

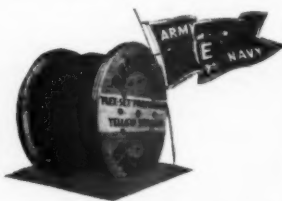
serving man-hours as we conserve critical materials, we have that obligation.

Itself born of extra shift production by Broderick & Bascom, Yellow Strand Preformed Wire Rope cooperates completely in America's intensive prosecution of the war. Its tough steel wires keep on digging, loading, lifting, hauling . . . long after lesser quality would have been replaced. Both government and industry require vast quantities of wire rope. Save it as you would time—by employing it efficiently.

Broderick & Bascom Rope Co., St. Louis

Branches: New York, Chicago, Houston, Portland, Seattle. Factories: St. Louis, Seattle, Peoria

**YELLOW
STRAND
PREFORMED WIRE ROPE**



B & B's Army-Navy "E" Flag with Service Star Means that

WE SERVE THE GOVERNMENT AS WE SERVE INDUSTRY: WITH DETERMINATION THAT OUR ENTIRE ENERGIES AND RESOURCES SHALL HELP TO WIN THE WAR

most of these is the one that makes aircraft production men feel they are treading water in leaden shoes—change orders. Such snap alterations have hamstrung production lines, kept output to 5,000 or 6,000 planes a month. If Kaiser can find the answer to that and to other problems, the air will be his oyster.

Wonder Man Hit

Henry Kaiser replies to charges of misuse of priorities and faulty tanker construction, but rumors still fly.

Shipbuilder-contractor Henry J. Kaiser always has insisted he needs no professional public relations counsel. To friends and associates who have urged him to hire a top-notch outfit to get the story of his growing enterprises to the public (which is furnishing a large slice of the money for them), he has maintained that he could handle the job.

• **Two Troublesome Items**—This week it looked as if energetic Kaiser might be facing a test of his abilities, that he might have to devote an increasing amount of his time and thought for the moment, at least, to public relations. Number one chore was to handle repercussions of a report issued Mar. 17 by committee of American Bureau of Shipping. As a result of its investigation of the breakup of the Kaiser-built tanker Schenectady last January, the bureau blamed faulty welding as a contributing factor.

A second assignment for Kaiser was to defend himself against "misuse of priorities" charges by WPB.

• **Friends Scout WPB Charges**—Meanwhile, Kaiser's West Coast associates and admirers were speculating on what lay behind the WPB charges. In view of Kaiser's record for speedy construction of much-needed ships, they wondered why WPB should suddenly snipe at him.

Rightly or wrongly, most of them were inclined to agree with Kaiser's own explanation that the charges were "merely the latest smear attempts of jealous rivals." Kaiser's enemies, on the other hand, saw in both episodes indications of toe-stubbing by the ebullient Kaiser—developments they have long prophesied and hoped for.

• **Criticism of Welding**—The report on the Schenectady breakup couldn't be brushed off quite so casually as the priorities charges. The tanker fractured amidships while lying afloat at its Portland dock Jan. 16. This was due, said the report, to "a tendency on the part of shipyard personnel to depart from recognized fundamentals of good welded construction for the laudable purpose



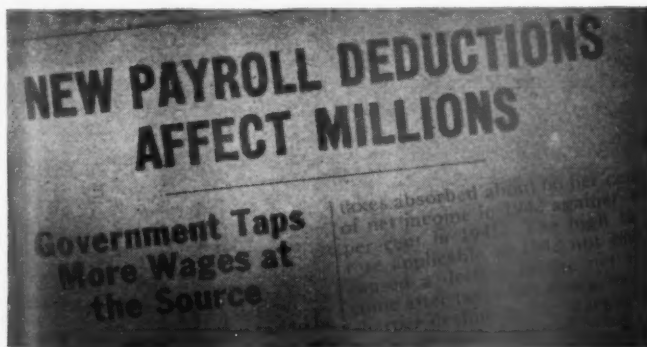
New accounting machines can be purchased in some cases under War Production Board Regulations. Also, in many organizations, we have been able to help solve their accounting problems without the purchase of new equipment. Increased capacity frequently results from mere revision of the system.



Every new man taken on means more work for the Payroll Department. Every instance of overtime means more entries on the payroll records. And every rise in the rate of labor turnover makes the going tougher.



Just when demands upon the Department are heaviest, competent workers leave and are hard to replace. New workers are more easily trained where mechanical equipment has been in use for some time. Which also means that the experienced worker sacrifices less productive time acting as instructor.



1943 is the Payroll Department's toughest year. On top of all its other burdens there's the added work involved in Victory Tax deductions.

A VICTORY

on the Production Front
that was won

BEFORE THE WAR!

☆ ☆ ☆

For its tremendous wartime expansion, American industry has had to fight . . . and fight hard. And in no sector of the home front has the pressure been greater than in the Payroll Department.

It has had many more workers to pay, more deductions to make from every payment, and one problem after another in maintaining an efficient staff.

But wherever there had been peace-time installations of *mechanical* methods, the Department was able to triumph over these wartime conditions.

In thousands of war plants Underwood Elliott Fisher Sundstrand Payroll Machines have enabled accounting procedure to keep pace with mounting production.

Many a company has taken advantage of our knowledge and experience by having us revise its system so as to handle the increased volume. And large numbers have seen the value of signing up on a yearly basis for the expert care provided by Underwood Maintenance Service. Our Maintenance Service from coast to coast is being kept in complete and efficient operation.

Spare parts, too—we are providing for all your Underwood, Sundstrand and Elliott Fisher machines—as well as a complete line of carbon paper and ribbons, unsurpassed in quality, for every make of office machine. Underwood Elliott Fisher Company, One Park Avenue, New York, New York.

Underwood Elliott Fisher Sundstrand PAYROLL MACHINES

★ We are now in war production on—U. S. Carbines Caliber .30M1—Airplane Instruments—Gun Parts—Ammunition Components—Fuses—Primers and Miscellaneous Items.

of speeding up construction" and to "insufficient numbers of trained, experienced welders and shipfitters for the job at the rate of production maintained, and an inadequate number of skilled welding supervisors."

The bureau's report, however, gave some real comfort to Kaiser. It said that there was evidence, in sister vessels of the Schenectady under construction, "of poor fitting of large subassemblies which necessitated considerable forcing into position by excessive use of jacks, turnbuckles, etc." But it also noted a lack of uniform quality in steel used in the hull structures.

• **Truman Probes Steel-Kaiser** has blamed the Schenectady mishap on steel from the outset. And he's getting support from Sen. Harry S. Truman's committee investigating war production. The Truman committee has summoned officials of Carnegie-Illinois Steel (U. S. Steel subsidiary) to answer charges that its Irvin Works supplied faulty plates for the Schenectady and concealed the defects by falsifying chemical and physical analyses. Employees of the Irvin Works, at the committee hearings, testified to fraudulent tests, but responsible officials denied knowledge of them and promised "changes in personnel."

The shipping bureau's comment on the steel plates was picked up by Kaiser at once. He declared he hoped "the substandard steel mentioned" would be "brought up to specification standards." (Until his new steel plant at Fontana, Calif., gets into production this summer, Kaiser's ships will continue to rely mostly on eastern mills for their steel.)

• **Son Edgar Speaks Up**—The report also brought immediate reactions in Portland. First was a statement by son Edgar J. Kaiser, manager of yards in the Portland area, that Kaiser tankers "are good, sound ships, of good workmanship and quality." Second repercussion was the resignation of Les Blackford, welding superintendent at the Swan Island Yard where the Schenectady was built.

While Kaiser officials insist Blackford is leaving voluntarily to join the Navy, Blackford himself says privately he is being made the goat; that he was forced to speed up production when the first tankers were built so as to keep up with Kaiser's other two yards in the Portland area and had too many amateur welders.

• **Rumors Go the Rounds**—Inevitably, talk has been going the rounds in Portland purporting to give the lowdown on Kaiser's tanker construction methods. Most common rumor is that, in attempts to speed production, not enough allowance was made for shrinkage after welding. Current talk is that of eight tankers completed, only two, the Quebec and Tony Point, are at sea, and the former is reported to have had porous welds which necessitated its being done over in parts.



GEARED FOR VICTORY

Aiding the war effort at home, Baldwin's new 500-ton locomotive, serving the iron ore district of northern Min-

nesota, has established a new pulling-power record of 140,000 tons. Dwarfed by comparison is a General Sherman Tank (M4), also being produced by the company.

Airways Opening

A temporary certificate to Pan American Airways adds impetus to competitive trends in foreign air service.

When the Civil Aeronautics Board allowed Pan American Airways only a three-year, temporary certificate to fly between New Orleans and Guatemala City last week, it underscored Washington's designs for competition in foreign airline systems. The plan dates back four years to American Export Airline's permission to bridge the Atlantic—a venture that is being delayed by the war.

• **Postwar Scramble Seen**—Because P.A.A.'s authorization is on a temporary basis, the way is left open not only to American Export, whose application for the New Orleans route was previously denied, but also to other operators who wish to set up services in this region, competing with P.A.A. Pan American's long effort to hold the outside world for itself appears frustrated by the incidence of war.

All major domestic airlines, meanwhile, have extended themselves to important points around the globe under contracts with the Army and Navy. No official word has come from operators or government officials, but it is understood that all will file for postwar foreign service permits.

• **Three Are Ready**—At least three companies already have made moves toward their postwar ambitions. Northeast Airlines, New England's system, applied for a route to Moscow a few days ago. United Airlines obtained option on a

Mexican line from the border to Mexico City. Hawaiian Airlines applied for a route to the American mainland.

Official reason given for rejection of American Export's application for the New Orleans run was that it would cost the company too much to set up a new route with radio equipment, airports, and maintenance bases. Pan American, however, can reach the Canal Zone objective by setting up only 1,000 miles of new route to Guatemala City, and by moving three of its big planes onto the new schedule.

• **Behind the Refusal**—To serve that route, American Export would have been forced to pioneer the entire 1,950 miles from New Orleans to the canal. The company had only two airplanes to do it with: One was the old PBY two-engine flying boat with which it made original test runs over the Atlantic; the other was a Sikorsky flying boat (not one of its new S-44's). In the back of the board's mind, also, was the fact that American Export had been ordered to divorce itself from its parent steamship company, but instead of complying, the company appealed. The board then re-issued the order, extending the time limit.

Several months ago, the board invited bids on routes to fan out of Miami over the Caribbean—to expedite war traffic (BW—Oct. 17 '42, p. 19). This invitation was instigated by either the State, War, or Navy Dept., or all three, and was interpreted by observers as a snub to Pan American. Besides covering that region, P.A.A. gladly would have bought and operated any available planes that might have been used on the routes.

• **A Feud Involved**—The board approved seven of the eleven applications

ELECTRIC FURNACE STEELS

WILL HELP BUILD

TOMORROW'S BETTER WORLD



"...WOW!"

"Hot ziggety! What a train!" And another boy dreams of his hand on the throttle of a sleek, shining comet of the rails—the train of after-the-war days to come. A sophisticated "wow", too, from you who will enjoy the luxury, comfort and safety of these air-conditioned hotels on wheels. You saw the beginning of a new era in rail transportation before war's necessity temporarily halted its progress. You'll see it resume at a faster pace when wartime demands no longer come first. Railroad engineers and designers have the "know-how". Republic will have the special Electric Furnace Steels to do the job.

Republic Electric Furnace Steels are now being used to build the world's finest fighting machines. But these same steels, in new and improved analyses, will make possible many amazing new developments for traveling America to enjoy in future years.

Fine electric furnace alloy and stainless steels have no equals in providing the additional strength and toughness essential to safety and economy at high operating speeds. And because of these qualities, over-all weight and size can be reduced through the use of smaller sections.

The response of these steels to hardening treatment produces long-lasting, wear-resisting surfaces. They resist corrosion, and the destructive forces of heat, sub-zero cold and that "grem-

lin-like" element known as "fatigue".

Republic—already the leader in the Electric Furnace field—has jumped its alloy capacity more than 700% to meet urgent war needs. For the world of tomorrow this holds a promise of better things than ever to work with and to live with—a brighter future for industry—for the farm—for the home. Republic Steel Corporation, General Offices—Cleveland, Ohio. Export Department: Chrysler Building, New York, N. Y.

REPUBLIC ELECTRIC FURNACE STEELS

alloy...stainless..."aircraft quality"

—also open hearth and Bessemer steels—cold drawn steel bars, sheets, strip, plates, tin plate, pipe, tubing, bolts, nuts, rivets, farm



fence materials, wire, nails, shelving, lockers, windows and other steel building items, and many modern fabricated steel products.



Enlarged reproduction free on request.

Jinnees of Freedom

In this land of liberty, free men have rubbed the lamp of knowledge and produced hosts of friendly Jinnees of many kinds. These good Jinnees multiply the productive ability of each pair of hands, bringing increasing freedom from want and from fear. In various forms they serve in the mechanized mining of coal and metals, in oil fields and timberlands, throughout Jinnee-filled factories, in every sphere of transport and construction.

The uninterrupted help of our Jinnees depends on stout sinews. And wherever these sinews must stand everlasting activity, America's friendly Jinnees have become confident of the dependability of Wickwire Rope.

For 122 years Wickwire Spencer has specialized in perfecting wire and wire products. Before any wire can go into Wickwire Rope its strength is tested and retested. Then when the rope is skillfully formed, giant juggernauts attempt to destroy sample pieces of it, to make certain it is typically *Wickwire* in strength and endurance.

★ ★ ★

Today Wickwire Rope production is breaking all-time records—helping to build and rig Liberty Ships, aiding in war industries, and doing heavy jobs on every front. Its only aim is speedier Victory—for an early return to service as the stout sinews of more and more Jinnees of Peace.

WICKWIRE SPENCER
STEEL COMPANY

500 FIFTH AVENUE

NEW YORK, N. Y.



STANDS FOR
FRIENDLINESS

FAMOUS FOR QUALITY IN WIRE, WIRE ROPE, SPRINGS, METAL CONVEYOR BELTS, INDUSTRIAL WIRE CLOTH, POULTRY NETTING, HARDWARE CLOTH, INSECT SCREEN CLOTH, ELECTRICALLY WELDED FABRIC FOR CONCRETE

received before the Navy froze the project (BW—Jan. 30 '43, p8) on the ground (among others) that it should have exclusive priority on the carrying capacity of the proposed lines. This is another Army-Navy row over jurisdiction; the board, meanwhile, is embarrassed by accusations of procrastination.

Some Washington intrigue experts think Pan American's temporary certificate was obtained by application of pressure to avenge the Miami-Caribbean snub. Such is not the case, however. Both the American Export and P.A.A. New Orleans applications were filed two or three years ago, and all hearings were completed long before the Miami-Caribbean affair came up.

Epidemics Loom

Doctors, drug men hear world-wide spread of disease is likely although new medicines cut death rate in battle.

Disease—like the war—has taken on a global character. That was the warning of leading scientists in the field of epidemics to the medical profession and the drug industry at last week's Conference on Planning for War and Post War Medical Services. Speakers declared the vast job of taking care of one or more pandemics may follow, or may be superimposed, on current war production and scientific personnel problems.

• **Disease Spreaders**—The experts in communicable diseases pointed out that widespread intercontinental use of air transportation may enable disease carriers to jump oceans with ease. In addition, hunger, mass movements of populations, shifting of refugees, and transfer and return of troops may help to render meaningless the old phrase "tropical diseases."

Sponsored by ten organizations in the medical and medical supply fields, including the American Medical Assn. and the leading medical supply trade associations, the conference was criticized by those who hoped it would become a forum for the discussion of plans for handling the costs of medical care. Actually, the only discussion of this came as part of a conference summarization speech delivered by Dr. Morris Fishbein, Editor of the A.M.A. Journal.

• **Fishbein's Statement**—Advocates of government plans to handle the costs of medical care, who regard the A.M.A. and Dr. Fishbein as their sworn enemies, rushed statements to the press in an effort to switch the conference spotlight to this subject.

In his short discussion, Dr. Fishbein said that organized medicine is "not



GIVE 'EM THE STUFF . . . That's OUR Job!

Two jobs must be done to win this war. One is to fight. The other is to make and deliver the weapons with which to fight.

Our fighting men and our fighting Allies have hit the enemy hard, damaging blows. But brutal, ruthless hordes still hold the powerful armed fortress of Europe, vast areas of Russia and China, and a rich, strategic empire of the Pacific.

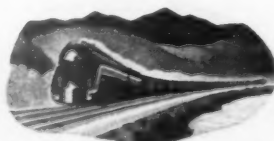
We have just started to fight . . . just begun to win. How much longer will this war last? How many more thousands of fighting Americans and their Allied comrades must die?

To these grim questions there is but one answer. And that is: the speed and quantity of production of the weapons of war here in America, and their transportation to the front.

The United Nations on every battlefield of the world must have more — more of everything to replace, to increase, and to maintain an unbeatable superiority over the enemy.

In America, we have the resources, the skill and the man-power to produce more — and still more. We must give 'em the stuff — That is our job! Nothing must be allowed to interfere with doing that job.

NORFOLK and WESTERN



Railway

S E R V I N G T H E N A T I O N A T W A R



AMERICANS HAVE THE

Habit of Winning

DURING the life span of the United States, we have engaged in several major wars. In all of these we have been the victors. With this habit of winning woven into the warp and woof of our way of life, we have no doubt as to the final outcome of the present conflict.

But to win—our armies demand untold

quantities of fighting materiel—including an endless supply of small arms ammunition. We at Ohio Tool will continue to make the tools that make this ammunition until the last shot is fired.

Our one purpose today is to "Keep 'Em Firing," so that the winning habit will continue.



OHIO TOOL COMPANY

CLEVELAND, OHIO

Manufacturers of Small Arms Ammunition Tools

DESIGNERS AND BUILDERS OF TOOLS, DIES, JIGS, FIXTURES, GAGES AND SPECIAL MACHINERY

officially opposed" to proposals made by the National Resources Planning Board "for better coordination of medical and health facilities, for increased use of clinics, health centers, and group practice, where feasible, and for extended use of the medical technical services."

• **Medicine in Industry**—Of greater industrial significance was the conference discussion of the job that has been done by the medical supply industries to meet vastly expanded war requirements for medicines, surgical dressings, and hospital equipment, and the plans for utilization of this expanded production capacity in a postwar world. Industry expansion was estimated between 200% and 500% in some instances. The conference also tackled a problem that will face many industries in the postwar era—the government's disposal of unused stockpiles.

Following examples of the industry's war production job were cited: (1) Starting at scratch, facilities have been developed for processing blood plasma so that donations from two million people will be handled in 1943; (2) as a result of sulfa drug production, pneumonia has a death rate of less than 1% among U. S. troops; (3) sufficient synthetic vitamins are being produced to prevent world-wide outbreaks of scurvy, rickets and other deficiency diseases; (4) production capacity for atabrine (synthetic antimalarial) has been stepped up to the point where it can replace dwindling supplies of quinine.

• **Lowered Death Rates**—Figures were cited to show that only one out of twenty soldiers dies from meningitis in this war, while the mortality rate from this disease was one in three in the last war. The death rate from wounds of all types in the Solomon Islands and Guadalcanal was given as less than 4% against a possible 5% to 7% death rate that might have developed had military doctors been forced to depend on the drugs that were available in 1918.

On postwar disposal of surplus government supplies, Col. Charles F. Shook, Army Surgeon General's Office, who started emergency planning for expansion of the medical supply industries in 1939, told the conference that stocks sold to the French at the close of the last war found their way back into international trade in competition with U. S. goods produced under wartime hardships. When domestic warehousing became a problem and the Surplus Products Board sold stocks to the highest bidder, Col. Shook said that pushcarts on lower Broadway were selling ointments in penny sales.

• **Some Other Problems**—Another speaker said that some drugs, including narcotics, which had been given to one nation were shipped back to the U. S. and sold at prices below those of the same products made by American manufacturers in the postwar period. An-

GREEN HANDS
"take hold" like veterans



One of the major developments of wartime industry is the speedier adaptation of inexperienced manpower to the handling of exacting production operations. This is how it is done today in many warplants.

Every operation and process demanding critical temperatures, pressures or flow rates is reduced to simple routine by installation of precision Foxboro Measurement or Control Instruments. Automatically, workers are continuously supplied with exact measurements to guide them... graphic records are provided wherever needed... manual control is com-

pletely replaced in many instances. Each production step is so simplified that even "green hands" take hold fast... produce accurately, in paying quantity, after only brief training!

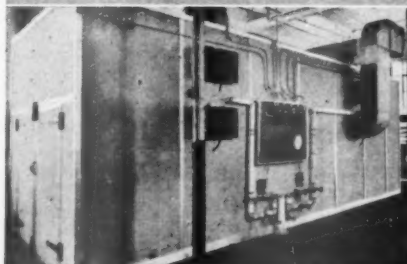
Make this note for post-war planning! "Investigate Foxboro Instrumentation as a means to improve production quality or efficiency." The Foxboro Company, 120 Neponset Avenue, Foxboro, Mass., U. S. A.

FOXBORO

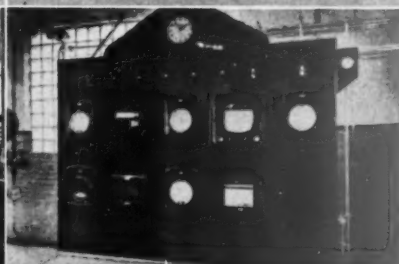
Reg. U. S. Pat. Off.

MEASUREMENT AND CONTROL SYSTEMS

Typical installation of automatic Foxboro Control on dehydrator for speedy, uniform production of dehydrated foods.



Foxboro Control developments in installations like this have made possible new techniques in aviation gasoline refining.



HIS FATIGUE



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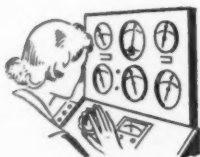
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IS YOUR LOSS!

Worker fatigue! It often takes the form of irritability, carelessness, or slowness to learn. It always means wasted materials, neglected machinery, irreparable time loss. To forestall fatigue, take stock of these electric aids that other plants like yours are using. Then, for experienced electrical help on similar problems, call in G-E Application Engineers.



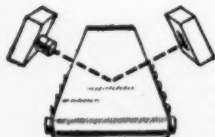
"INDOOR DAYLIGHT" was a vital factor in solving one fatigue problem that showed up as excessive time loss due to headaches, exhaustion, and other physical disturbances. In this war plant, a check-up showed 30 per cent fewer calls for headache tablets—after the lighting was checked by a wartime lighting counsellor.



REMOTE CONTROLS applied to cement kilns eliminated miles of walking, thereby solving a serious fatigue problem. The controls of feeding rate, kiln speed, and temperature were brought together at a single station, thus eliminating the necessity for operators to walk back and forth between charge and discharge ends.



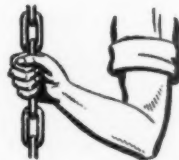
AUTOMATIC ARC WELDING so reduces physical effort that welding becomes one of the preferred war-plant jobs, and can readily be done by women workers. Instead of having to handle electrode holder and cable, change electrodes frequently, and raise and lower the head shield every minute or so, the operator merely watches the arc and adjusts a dial.



ELECTRIC EYES have taken over a tedious task that required frequent rotation of operators. The job was brightness control of electrolytic tin plate speeding by at 600 feet per minute. Now, a phototube watches the reflecting surface, relieving eye strain, leaving the operator free for more effective supervision. Operators can now work a steady 8-hour shift.



ELECTRIC TIMING and control of a complex cycle of operations in an Eastern war plant helped eliminate frequent manual handling of heavy material. In hundreds of other operations, G-E timing devices have taken over tiring "clock-watching" duties and permitted workers to concentrate on productive work.



ELECTRIC MUSCLE to open furnace doors in a plant making steel castings for tanks is being furnished by G-E Thrustors. Thus, a tiring operation has been eliminated from a job that's hot and heavy in any case. In another plant, G-E Thrustors have been applied to operate heavy clutches on shears; even elderly workers can maintain high production.

GENERAL ELECTRIC COMPANY, SCHENECTADY, NEW YORK

GENERAL  ELECTRIC

620-41-1000



★ Imagine the shock these Muehlhausen Springs must absorb when this Bren Gun Carrier hits the ground—the thousands of pounds they must cushion to protect this overgrown jeep.

To meet such operating requirements, the specifications for these springs are exacting; to meet the demands of the war program, the quantities are huge. These two objectives would be difficult to achieve, were it not for Muehlhausen's craftsmanship and manufacturing facilities.

At Muehlhausen, one complete plant is devoted to hot-coiled springs. Here the most highly specialized heat treating and forming equipment assure quantity production.

MUEHLHAUSEN SPRING CORPORATION
Division of Standard Steel Spring Company
775 Michigan Avenue, Logansport, Indiana



other surplus disposal problem noted at the conference was the need for determining the purity or quality of surplus materials.

To meet these problems, Col. Shook suggested a law permitting manufacturers who filled government contracts to repurchase their own surplus materials. He also recommended that the government establish a planning division now to make sure that surplus supplies go first into relief and rehabilitation channels, and he urged the establishment of industry committees to assist in the disposition of post war supplies.

Boost for Tobacco

Permission to increase acreage pleases farmers and will help Georgia railroad that sponsored its growth.

Growers of tobacco throughout the Southeast had reason to feel happy this week with the announcement from Washington that they may exceed their 1943 acreage allotments by 5%. Farmers last year pocketed record tobacco income, topping \$500,000,000 for the first time in history; in 1941 their take was \$332,000,000, and the previous peak was around \$450,000,000 in 1919. They're counting on as good or better this year, thanks to large domestic demand for smokes plus lend-lease and other exports, so the higher acreages look like money in the bank.

• **Tobacco Road**—Yet, as interesting as tobacco prospects are to affected farmers, the situation is no less interesting to the Atlanta, Birmingham & Coast Railroad. This road, just over a quarter century ago, set out to make Georgia a

commercial tobacco producing state. Its 649 miles of roadbed now cut through the heart of the state's bright-leaf tobacco belt, serve most of the auction markets and warehouses. It is the Tobacco Road of Georgia, the fabulous stagehit to the contrary notwithstanding.

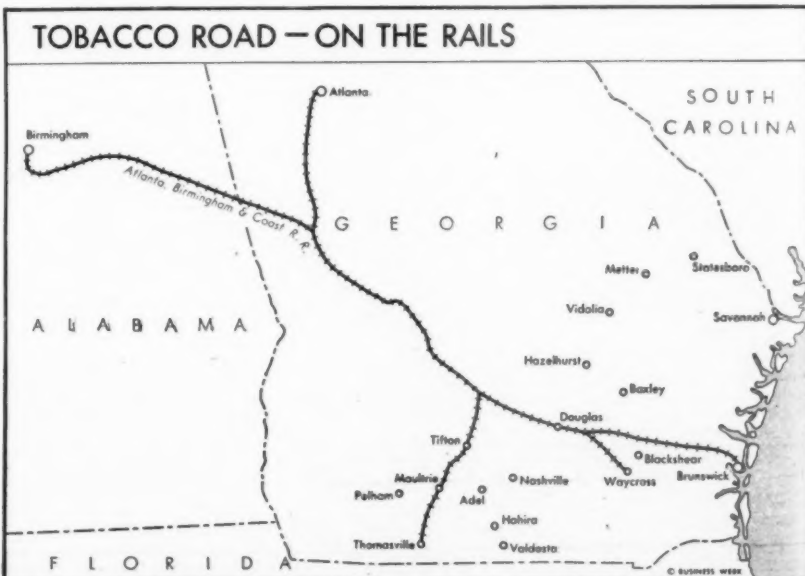
When the A. B. & C. (now controlled by the Atlantic Coast Line) launched its tobacco campaign 26 years ago, it saw, of course, lucrative freight in tobacco. But the motive was not altogether selfish. The boll weevil was moving in on cotton, Georgia's largest money crop, and the railroad's officials, along with other public-spirited citizens, were anxious to help the farmers find other profitable products.

• **Old But Not Prominent**—Tobacco growing was not new in Georgia; it had been carried on to some extent ever since colonial times. However, as late as the early 1900's, little was shipped from the state commercially.

In 1912, the late W. W. Croxton, son of a Virginia tobacco planter, joined the A. B. & C. as general passenger agent. One of his jobs was to watch agricultural development along the line, and he shortly interested individual farmers in planting experimental patches of tobacco for market. He arranged meetings, brought Dept. of Agriculture men from Washington, and by 1916 had the state tobacco-conscious.

• **Quarter Century's Record**—As a direct result of this campaign, Georgia's first warehouse and market were established at Douglas in 1917. That year the auction handled a bit less than 600,000 lb., grown in that neighborhood; in recent years the state's crop has averaged around 70,000,000 lb.

Today there are 49 tobacco warehouses in 15 southern Georgia cities. Yet the Atlanta, Birmingham & Coast's agricultural experts feel that the state's potentialities as a tobacco producer have





DAVY JONES'S BLOODHOUNDS

BACK and forth, grimly nosing for subs . . . quick dash with thrilling turns when quarry is spotted . . . that's the day's work for Davy Jones's bloodhounds . . . the PC Navy.

You read of fewer sinkings nowadays. That's because these 110- and 173-footer SC and PC boats are on the job in increasing numbers. They're designed and powered and armed to get the subs with ash-cans, deck guns, or both.

The power plants are diesel. Many of the engines are by Cooper-Bessemer. With diesel power a boat maneuvers quickly. Its depth charges do their deadly work more surely. Diesels also drive generators which operate pumps, lights, ventilating fans, listening equipment and fire control systems . . . with plenty of reserve power for emergencies.

Today all Cooper-Bessemer diesels go to war jobs. War is also showing us how we can build better diesels for your future peacetime needs.

**THE
Cooper-Bessemer**
CORPORATION
Mt. Vernon, Ohio • Grove City, Pa.

BUILDERS OF DEPENDABLE ENGINES FOR 110 YEARS

**Maybe Your
Post-War Product
is in Our Vault!**



OF course, we don't have your complete post-war product in our blue print vault. But if your pre-war product is actuated mechanically, chances are we can make it a new product by simply replacing the old actuating means with Hydraulic Controls that are already tested and perfected! "Tomorrow" may be forecasted as "The Hydraulic Age"—and Blackhawk has something special for you that even strikes amazement from hydraulic experts!

Even though you don't go ahead with the building of your post-war product now, you are undoubtedly thinking about it. And a simple ex-

change of correspondence will prove whether or not what we have will fit into your plans for that future day when your salesmen and customers will ask, "What's new?"

We can do for you what we've done for others — because we have been building Hydraulics for years and have perfected and tested units that have placed our customers' products ahead in their fields.

For information on Hydraulic Controls for your future product designs — or for your present Hydraulic applications — write BLACKHAWK MFG. Co., 5300 W. Rogers Street, Milwaukee, Wisconsin.



Blackhawk Hydraulics Provide These Advantages . . .

Newness for your product . . .
Efficient, smooth, sure, accurate power with finger tip control . . .
Safer for men and machines . . .
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Proven by 17 years of dependable service . . . A name accepted and recognized by leading equipment buyers everywhere . . .
Service Stations at key points all over the world.

Blackhawk Hydraulics Are Standard Equipment on . . .

Snowplows . . . Road Graders and Bulldozers . . . Farm Equipment . . .
Railroad Equipment . . .
Amphibian Tanks . . . Industrial Lift Trucks . . .
Power-Moving Machines . . . Material Handling Equipment . . .
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BLACKHAWK
Hydraulics

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WHEELED JACKS



PORTO-POWER



These Standard Blackhawk Products Are Sold Through Leading Automotive and Industrial Distributors

by no means been realized, that there are hundreds of thousands of rich acres that could profitably be devoted to the crop's culture. Expansion in acreage would be welcome, because the road had compiled an impressive string of deficits prior to 1941 and 1942.

• **Quotas Limit Acreage**—For the time, of course, expansion of tobacco acreage in Georgia as elsewhere is subject to acreage and marketing controls voted each year by the farmers and administered by the Agricultural Adjustment Agency in Washington. Moreover, there is some doubt that farmers will be able to take full advantage of the extra 5% quota that is being allowed them this year.

In Georgia, for example, farmers started to prepare their seed beds early for the 1943 crop. Much was planted in December, the rest early this year. But there have been a couple of cold snaps that have damaged the young plants, and blue mold, a familiar blight, has been fairly widespread.

• **Spray and Smudge Pots**—Farmers now are standing by with spray guns to combat the mold and are ready with smudge pots and the inevitable tobacco cloth to guard against any further damage from cold. As is always the case, they planted more in seed beds than were needed to fill the fields at transplanting time, so there probably will be no great number caught short.

The usual experience is that tobacco farmers ultimately underplant their allotted acreages by as much as 5%. This year it was expected that shortage of manpower, plus some difficulty in obtaining fertilizer and insecticides, might increase the deficiency to as much as 8%. The 5% expansion in permissible planting, therefore, may no more than bring the crop up to the original quota acreage.

LABOR PINCH ON LAKES

Commercial fishing on the Great Lakes began to bring in its first hauls of the season this week, a start on what's expected to be 150,000,000 lb. of food for the eastern markets. Prices are up, and the catch, judging from fishermen's experience last fall, will be better than usual, but the owner-operators of 2,500 fresh water fishing boats are burdened with manpower troubles.

War factories and the armed services have taken hundreds of men who normally would be anxious to spend the season as members of fishing tug crews at \$7.50 a day. Those who are left are demanding higher wages. The Cleveland local of the A.F.L. Trapnetters Union, for example, is demanding \$9 a day.

Last year prices for pike and perch averaged about 18¢ a pound wholesale. This year a 25¢ average is expected.



Now...

GREER CONVEYORS

Hoist the Ammunition!



DELIVERING "enough and on time" has long been duck soup for Greer conveyors. Fact is, the Greer Multi-tier Conveyor holds a leading place in the confectionery and bakery fields because of the unique ingenuity of its construction, precision operation, and staunch reliability.

So...hoisting ammunition in U.S. Navy destroyers gives Greer conveyors a front-line chance to make it mighty hot for Axis submarines. Such installations are putting to good use Greer's ability to build conveying machinery. Today, Greer "is in

the Navy" one hundred per cent — making vitally essential war products for Uncle Sam to put to work on the fighting fronts of the seven seas.

But we want all our good friends throughout the country who are using Greer Confectionery and Bakery Machinery to know that we stand ready to help them to the utmost of our ability. Any problem of maintenance or part replacement that they now have is the problem of Greer engineers, too. We want to hear about it.—J. W. Greer Company, 119 Windsor Street, Cambridge, Massachusetts.

MAKERS OF FAMOUS

GREER

MULTI-TIER CONVEYOR

THE WAR—AND BUSINESS ABROAD

Submarines Must be Licked

Although the United Nations are pressing their offensives against Hitler on three fronts, the telling blows cannot fall until the U-boat menace is driven from transatlantic lifelines.

While Winston Churchill's bright new postwar world and Hitler's Heroes' Day dirge claimed world attention at last week's start, German U-boats began a long-predicted and systematic assault upon the United Nations' battle-bound ships. It may be that the U-boat will soon steal headlines from the builders of the new world and, thereby, explain the British Prime Minister's unexpected prophecy that victory might not come until 1945.

Subs Slash Lifelines

As the German people listened to Hitler's promise that even unrelenting sacrifice held only escape from destruction, Nazi submarines prowled the lifelines from American arsenals to European and African battlezones, bit deeply into Allied convoys loaded with men and materials. On the success of antisubmarine warfare hangs the timetable of United Nations offensives. Germany is still believed to be producing U-boats faster than they are being destroyed—despite devastating raids on component plants, assembly points, and sub havens.

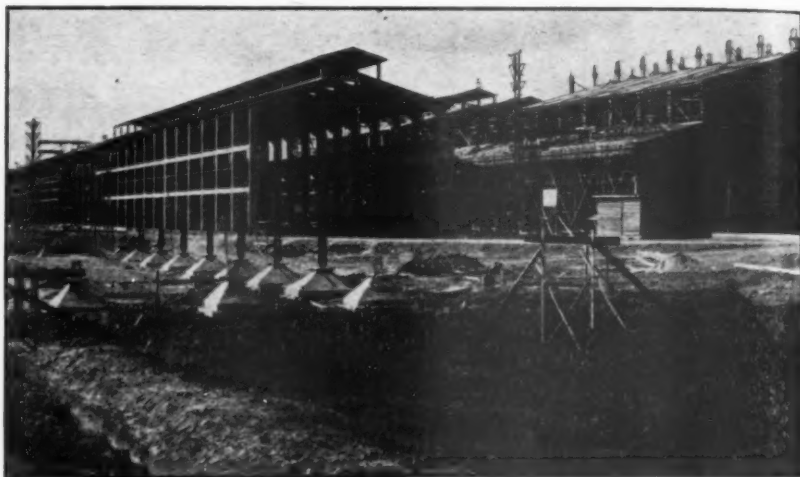
Already master of more than a dozen nations by conquest and engaged in bleeding four satellite states on the eastern front—Finland, Hungary, Rumania, and Bulgaria—Hitler pointed a warning finger at the few remaining neutrals. Criticizing their "well-known arrogant and complacent way of watching events" made possible by "sacrifices of those who are saving them from making direct acquaintance with the hard realities," he added: "One thing, however, is certain: In such periods as this only those nations with a clear attitude can, in the long run, continue to exist."

Small States Listed

Turkey may well have thought of Dr. Karl Clodius, one-time master Nazi economic negotiator, who is Ankara-bound with new hopes of exchanging German goods for precious Turkish chrome (BW—Jan. 9 '43, p52). But Turkey will not accept German aspirin, cameras, and mouthorgans, when Britain and the United States are delivering guns, planes, and munitions. The Allies stand ready to contest a German drive across the Dardanelles with the armor and garrisons of the Middle East.

Sweden certainly could feel indicted,

in view of her continuing insistence upon creditless trade with the Reich, and in view of her inevitably dangerous position—if and when Allied troops land in force along the Norwegian fjords.



FOR THE FUTURE

Rapidly taking shape in the highlands above Rio de Janeiro is South America's first important steel mill project. The United States is providing the equipment as part of its hemisphere economic program. With all Latin America jealously watching the progress, work on the electric repair shop

(above) and blast furnace foundations (below) is virtually completed. The mill will have an annual capacity of 260,000 tons of pig iron, providing the first significant competition to U.S. steel imports in the Southern Hemisphere. Brazil, however, will turn out mainly rails and rough steel goods, will still depend on U. S. steel imports for finished steel products.



WHERE A WORK-WEEK IS 168 HOURS



EVERY DROP of diesel engine fuel oil is precious—for diesels don't rest—on the cargo lanes. Nor do men. A day is 24 hours. A week is 168.

But there's a promise in the eyes of those men. Burning eyes, deep-set in gray, dog-tired faces. A promise to Greece, and France, and Belgium...

There's a promise, too, in the steady chug of the diesels. A promise to keep pounding on, through the blue-white hell of the North Atlantic, with that brute power and ruggedness we build into them. A promise to furnish power, 168 hours a week. And another promise, too...

It's this: that tomorrow, our diesels will continue their 168-hour weeks, and serve more places than ever before. So that man-weeks can be shorter... power cheaper... work easier... transportation better and swifter than ever before.

And every man here is working, now, to see that Rogers products keep both promises. Rogers Diesel and Aircraft Corporation, 1120 Leggett Avenue, New York, N.Y. Divisions: Hill Diesel Engine Company, The Edwards Company, Edwards Aircraft Products, Inc., Ideal Power Lawn-mower Company.

ROGERS

DIESEL AND AIRCRAFT CORPORATION



TRADE MARK REG.

Diesel Engines, 5 to 2000 h.p. • Gasoline Engines • Generator Sets • Generators • Power Units • Switchboards • Pumping Units • Hydraulic Aircraft Equipment • Recoil Mechanisms • Power Mowers • Power Brushes • Snow Removal Equipment
Streamlined deluxe Railway Motor Trains • Diesel Locomotives



At the Timken plant her friends all call her Toni Cap, but her real name is Antoinette Zahachevski. Yes, her father and mother came from Russia, but Toni was born in America, and is a typical American girl all the way from being a high school graduate to having a liking for high heels, jewelry, basketball and sport clothes. She has one brother in the Signal Corps and another in the Infantry. Perhaps that explains why she gave up stenography to get a job helping to make war material. For Timken factories are 100% on war work.

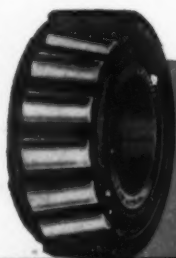
The machine she is operating in this picture measures ten times more accurately than even the micrometer, that wonderful tool which has always been the symbol of extreme accuracy, thousands of which are in constant use in the Timken factories.

But even the "mike", with its ability to measure to limits of 1/10,000th of an inch, is not accurate enough to control the extreme precision needed for many operations in the making of Timken Bearings. So, today, many a micrometer in the Timken plant has been superseded by almost super-human machines,

such as the one Toni is operating in this picture, which can measure to limits of 1/100,000th of an inch. And in the Timken laboratories there are instruments which can measure in terms of one millionth (1/1,000,000th) of an inch.

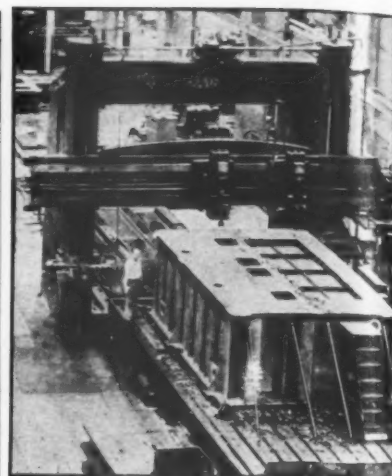
Precision like that, plus the special Timken-made steel used in Timken Bearings, plus the advantages of Timken Bearing *Tapered Design* (tapered rollers operating between two tapered raceways)—explain why Timken Bearings by the hundreds of millions are giving unequalled superiority to Uncle Sam's planes, ships, tanks, trucks and gun mounts.

And when happier days come again, those same points of superiority in Timken Bearings, will again be available to serve you so well in your automobiles and trucks, your railroad cars and locomotives, your farm implements, and your industrial machinery and mining equipment of every kind—wherever wheels and shafts turn. The Timken Roller Bearing Company, Canton, Ohio.



TIMKEN
ALL THERE IS IN BEARINGS

COPYRIGHT 1943, BY THE TIMKEN ROLLER BEARING COMPANY



LEND-LEASE IN REVERSE

Five giant metal-working machines, shipped out of England just before the heaviest air raids, are helping General Electric turn out propulsion sets for cargo vessels in time to meet production requirements. One of two planers (above) is capable of removing metal from the surfaces of three 20-ton gear casings simultaneously.

the Iberian peninsula the United Nations' offensive intended for western Europe.

And the war in Tunisia was not going well for von Arnim and Rommel. The British Eighth Army under Montgomery had pulled in its meandering supply columns for a giant push against Rommel's Mareth line position. One heavily armored detachment bowled onto the coastal slopes between the Matmata hills and the sea, another equally powerful arm swept around the southern Mareth forts.

Rolling down from the hills around Gafsa, American armor crept into the defiles that point to both Sfax and Gabes. With dominating hill emplacements held by the Germans, the road to the sea will be perilous, particularly so if Rommel withdraws north from Mareth. In northern Tunisia, a coordinated drive gathered headway toward the Bizerte and Tunis bridgeheads to Sicily.

Axis Trains Blasted

In the European theatre of the war, Russian artillery hammered at the approaches to Smolensk, unmindful of the bitter engagements raging in the South to hold and beat back the dwindling German counteroffensive.

British planes continue to level carefully selected German industrial targets, and to blast communications in western Europe. Peculiarly alert to the weaknesses of the Reich, British Spitfires and

MORALE... *in Bags*



AMONG THE BAGS PRODUCED FOR WAR SERVICE BY BEMIS ARE MULTI-WALL PAPER BAGS SLIPPED OVER CLOTH BAGS FOR FOODS TO BE SHIPPED OVERSEAS. THESE PACKAGES ARE ESPECIALLY DESIGNED SO THEY CAN BE TOSSED INTO THE WATER AND CARRIED ASHORE WITHOUT DAMAGE TO CONTENTS.

Morale among fighting men depends upon full mess kits, and Uncle Sam spares no effort to see that his warriors on land and sea are the best fed in the world.

Getting this all important food to the men on our far-flung fronts in a sound, wholesome condition is just as important as "keeping their powder dry." It's a task that calls for wide experience and know-how . . . a task the bag industry has taken in its stride.

In the 22 Bemis mills and factories more than 8,000 employees have made millions of bags to protect and transport food over land and sea, from farm and factory to fighting men. We like to think this our contribution to morale for Victory.

In addition to this important work, we still find time to supply industry and agriculture with bags for other war materials and essential civilian goods. Often these are new types of bags to replace containers no longer available. We are ready to work with you in supplying packages for your war or civilian production. If you have a packaging problem . . . present or future . . . let's talk it over.



CONTRIBUTING TO VICTORY

The work of Mrs. M. Macek, at the Bemis factory in St. Louis, is more than just a job. It is a patriotic service. Mrs. Macek is working on war orders for Uncle Sam. Her husband is on active duty in the U. S. Army.

Bemis Bro. Bag Co.

611 SOUTH FOURTH STREET • ST. LOUIS, MO.



☆
Buy more
War Bonds
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B is for

...— **BOMBERS**
...— **BEARINGS**
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BOMBERS fly higher and further when fleecy Kapok FELT insulation protects flight crews against stratosphere cold and deafening motor and machine-gun roar. FELT also cushions instruments against vibration.

BALL BEARINGS...Without FELT anti-friction bearings would be an impractical extravagance in many types of machinery. You'll find a FELT washer close to nearly every point where a sealing element is required. It stores and keeps lubricants in, and foreign matter out.

BOOTS...Aviators, Paratroopers, and Russian soldiers, are shod in FELT boots against rigors of extreme cold. Our own boys, on land and sea and in the air, are FELT-protected from head to foot. Fortunate owners of FELT slippers know true comfort.

BUSINESS and BOATS...Practically every Business machine is sound- and vibration-deadened with FELT. FELT isolators are being used in PT boats and submarines.


BUFFER and BUMPER...FELT, as hard as maple, is ideal for buffing or polishing glass and metals. Paratroopers packsacks are padded with FELT; their boot soles are thick soft FELT, bumpers to cushion landings.

BUY...Only first rate FELTS, meeting required specifications and tests, will function properly. Light weight substitutes will not do! Check this with your engineers... then buy American Felt with confidence.

BACKGROUND...Tell us your requirements. Take advantage of our long and comprehensive experience. Helpful personal counsel awaits your call.

American Felt Company

TRADE MARK

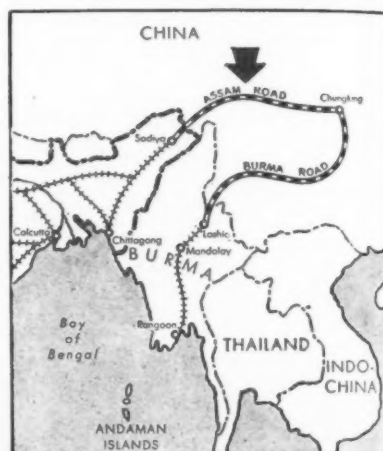
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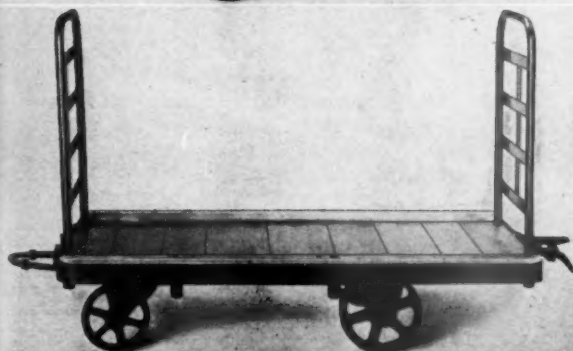
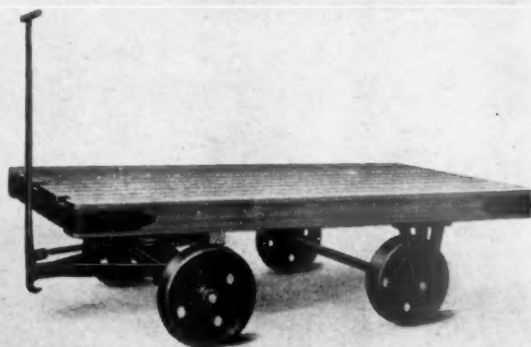
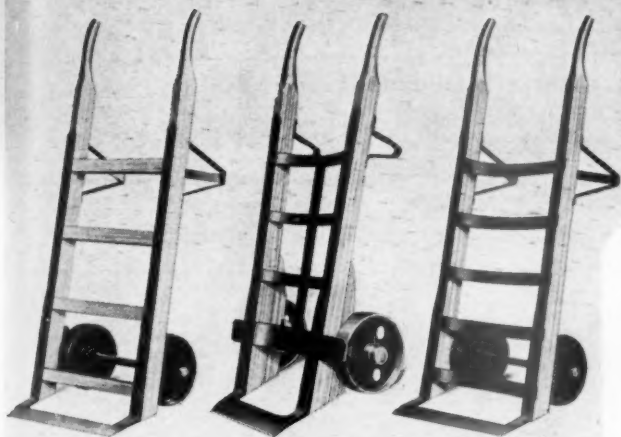
New York; Boston; Chicago; Detroit; Philadelphia; Cleveland; Los Angeles; San Francisco; Dallas; St. Louis
PRODUCERS OF FINEST QUALITY PARTS FOR OIL RETAINERS, WICKS, GREASE RETAINERS, DUST EXCLUDERS, GASKETS, PACKING FELTS, VIBRATION ISOLATING FELTS AND INSULATING FELTS



LONG TRAIL

Years ago, Chinese postal maps charted trails from China to India, 400 miles north of the famed Burma road. After Japanese armies cut China's last southern lifeline, surveying of the Assam road began, and 5,000 coolies started construction (above). Like the Burma road, the new road traverses 20,000-ft. ranges (lower) and crosses half a dozen rivers. Even when the Burma road is freed, the new highway will still be needed—for both will be inadequate to handle the goods required by China.





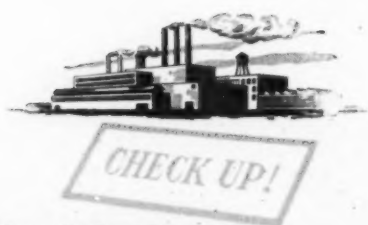
GLOBAL war puts an ever-increasing strain on our Army's Services of Supply. The perfectly planned and executed African operation demanded that tons of essential materiel be moved to the Theatre of Operations. • COLSON trucks, casters, and materials handling equipment of special design, are playing a vital part in the "Battle of Supply."

Colson products are used in plants throughout the nation to speed war production.

*Your dollars are a part of
the Battle of Supply too —
★ Buy War Bonds ★*

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CASTERS • INDUSTRIAL TRUCKS AND PLATFORMS • LIFT JACK SYSTEMS • BICYCLES • CHILDREN'S VEHICLES
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Electrical failure somewhere in your plant may be more serious than you think...

WARTIME restrictions make copper products hard to get—this includes electrical wire and cable. It will pay you to protect what you have.

Anaconda's Preventive Maintenance Plan will help you check to see that cables in your plant are not being abused... to detect electrical weaknesses that can be corrected.

If you follow this free plan you not only help yourself, but more important, you help the war effort. This manual provides a practical automatic method for complete analysis of circuits and equipment... uncovers potential weaknesses... methods for correcting them... with charts to enable quick periodic check-ups.

4822581



"Tomorrow may be too late... do it today!"

ANACONDA'S PREVENTIVE MAINTENANCE PLAN



Anaconda Wire & Cable Company
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Please send copy of the Anaconda
Preventive Maintenance Plan for safe-
guarding production.

381

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Company _____
Address _____ City _____

Intruders play an untiring game with French, German, Dutch, and Italian freight and passenger trains chuffing across the continent. In one night, raiders from Malta—using a guarded technique—blasted 15 locomotives. Fighters from Britain attacked 14 French trains on the same day. Day after day, destruction of Axis motive power more than keeps pace with German construction.

Allies Arm With Ships

Thousands of miles from these fronts, ships glide down the ways of American shipyards at an ever increasing rate. With almost 20,000,000 tons the 1943 objective—to be added to the current United Nations pool of 40,000,000 tons (BW—Feb. 20 '43, p108)—shipbuilders are gaining in the race with U-boat sinkings. All Axis political maneuvering and last-ditch military thrusts and counterthrusts aside, this is the one battle on which all other Allied battles depend

CANADA

Overseas Arsenal

Almost from scratch, the Dominion has built a huge war machine to help supply all of the United Nations.

OTTAWA—Entering a budget year in which almost \$5,000,000,000 will be spent for war alone, Canada's munitions production will hit a rate of \$3,700,000,000 a year by the end of March. Although all existing plant capacity is fully employed, the Munitions and Supply Dept. figures on increasing output during the rest of the year without new factory construction.

• **Orders Grow**—To date, Canada has placed close to \$7,000,000,000 worth of war contracts, half for its own account and \$2,750,000,000 for United Kingdom. The balance is composed largely of contracts placed for the United States, principally for aircraft.

Out of about 4,000 plants now making war equipment, only two are turning out the same kind of products as they were in the war's first year. Production capacity has been increased \$1,000,000,000 while the ranks of factory workers have climbed from 300,000 to 1,000,000 since hostilities began.

• **Plane's War Boom**—Prewar Canada had practically no aircraft industry. One or two Montreal plants employed less than 1,000 persons on body and assembly work. In 1939 and 1940, a half-dozen plants worked on British contracts, had an output valued at a little more than \$40,000,000. Aircraft out-

SHIP RIGHT *FOR VICTORY*

These boxes bear War Goods.

Most boxes do — but no matter what's in them, the product required the use of material, money, labor and time — and America has none of these to spare.

In other times we used to speak of "replacing" goods that became lost or damaged. Now we know that term won't do — for you can't replace time, nor material, money nor labor, except by using more of it — and America has none of these to spare.

"Warlike conditions
make it more necessary
than ever for shippers,
handlers and receivers
of freight and express
to strive for the goal of
Perfect Shipping."

JOSEPH B. EASTMAN
Director
Office of Defense
Transportation

PREVENT LOSS and DAMAGE

Observe
PERFECT SHIPPING MONTH
— in April and EVERY MONTH

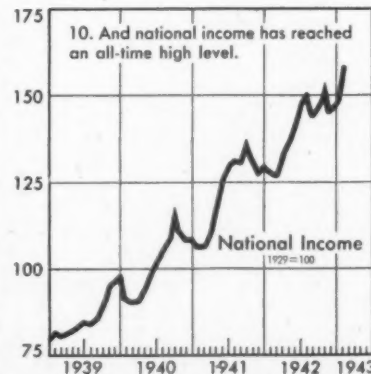
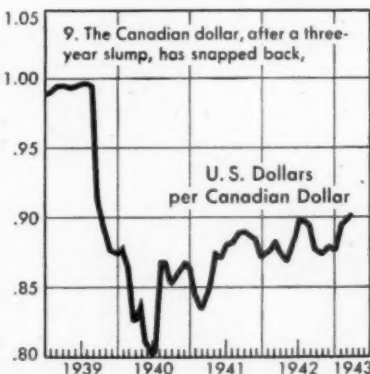
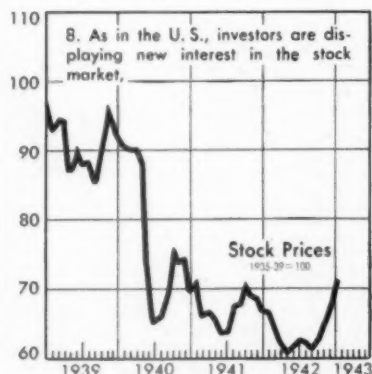
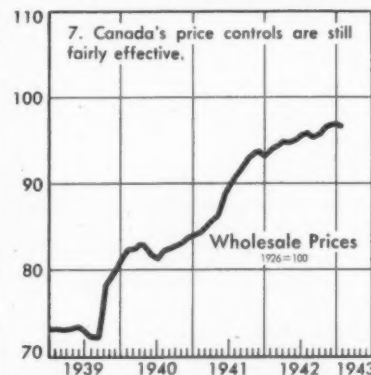
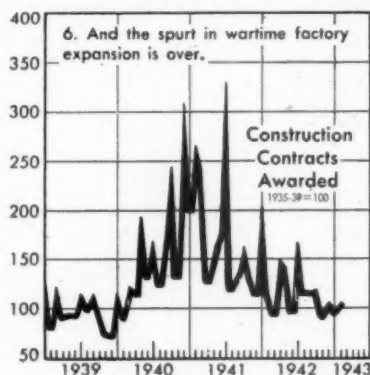
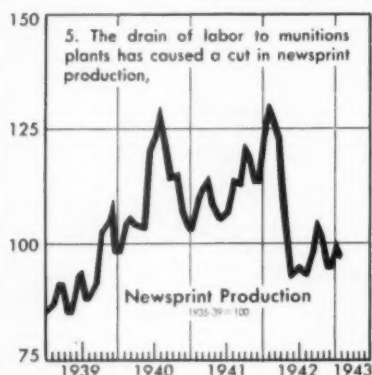
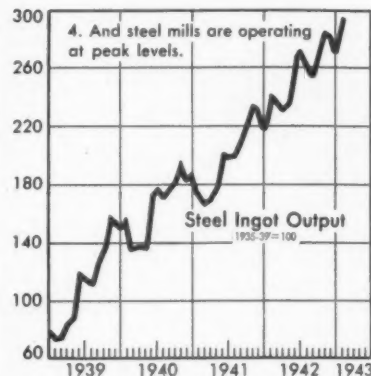
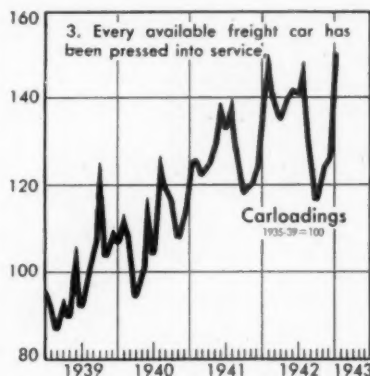
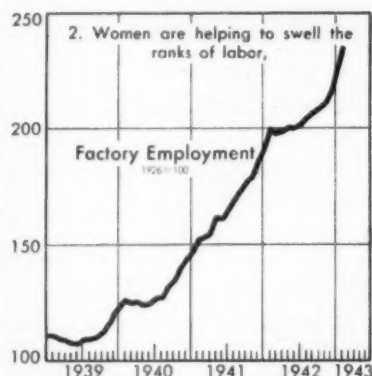
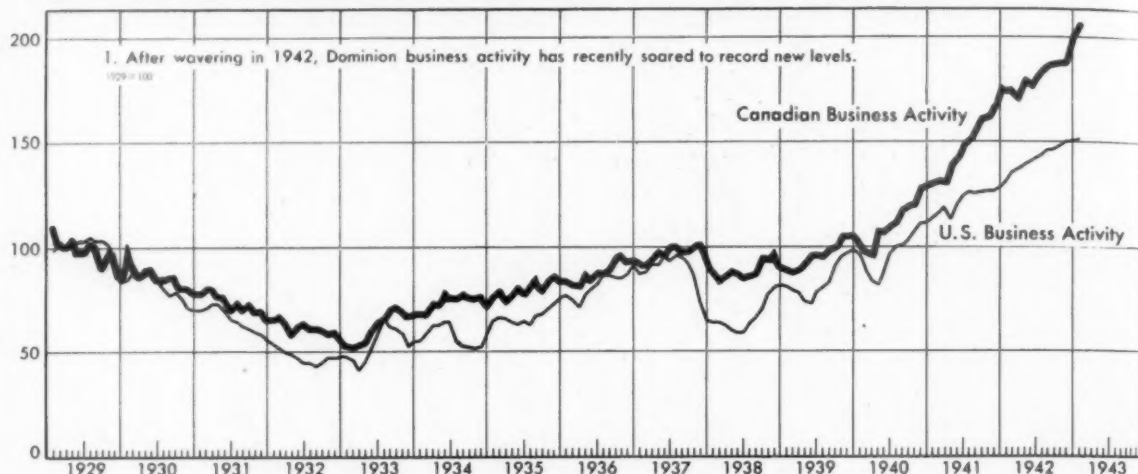
Association of
AMERICAN



RAILROADS

Washington D.C.

CANADIAN BUSINESS HELPS FIGHT THE WAR



Data: Dominion Bureau of Statistics

© BUSINESS WEEK



Another Story of **W.E.S.** *at Work*

WESTINGHOUSE ENGINEERING SERVICE

A nationwide corps of engineers offers you electrical and production experience gained through years of working with your industry.

In addition to engineering help on specific industry problems involving electrical power, these men can give you assistance on these other vitally important activities:

Product development: engineering of equipment to meet war requirements.

Maintenance: help in making existing equipment serve better, last longer.

Rehabilitation: redesigning and rebuilding obsolete equipment for useful service.

Material substitution: adapting available replacements for critical materials.

W.E.S. is available to *all* industries. Put it to use today on your production problems.



mountain-moving giant

gets a feather touch

It takes mountains of coal to stoke the furnaces under a great nation's war effort. Today, the largest dragline ever built is uncovering literally acres of badly needed coal. Weighing 2,400,000 pounds, its 185-foot boom can reach out half the length of a city block. With each trip of the giant scoop, a half carload of earth is stripped away.

With conventional control, the giant's 1400 horsepower muscle would put undue strain on the machine. But engineers of the dragline manufacturer, the operating company and Westinghouse teamed up on the problem. Together, they adapted a method of control that had never before been used for this purpose.

Rototrol, the Westinghouse development that provides smooth starting and stopping for the high-

speed elevators at Radio City, was applied as a control for the giant dragline. It proved that it could handle the enormous surges of power, the complexity of motions, the need for rapid acceleration and deceleration. It limits regenerative current peaks, minimizes mechanical shock and stress.

There you have an example of Westinghouse Engineering Service in action. It's a co-operative effort... a pooling of skills and techniques.

Can that kind of teamwork increase your production or cut your manufacturing costs? The nearest Westinghouse office is a W.E.S. headquarters. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

J-91005

Westinghouse
PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE



Want to be low bidder on the next \$50,000,000 dam?

• A new era is here in bulk transportation •

SUPPOSE you're an engineer bidding on another great reclamation dam like Boulder, Shasta or Grand Coulee — and some *are* in prospect to help America feed the world. Suppose the ten to fifteen million tons of aggregate you'll need for concrete must come over the mountains, from a pit 25 or 30 miles away. How you elect to haul this tonnage can make a difference of millions of dollars in your bid!

Any kind of road for wheeled traffic may cost upwards of a hundred thousand dollars *per mile*, with the grading, tunneling and heavy bridges required. Rolling stock,

with operating personnel, is another large expense and haulage is always intermittent and often interrupted in bad weather.

Against this, Goodyear offers a method of transporting huge aggregate tonnage — at a fraction of these installation and operation costs. This is by means of the "rubber railroad," or Goodyear overland belt conveyor system — a carrier whose capacity, efficiency and economy have been proved on the world's greatest construction jobs.

World's lowest-cost haulage

Here are the reasons why. The

Goodyear belt line goes "crow flight" across country. It easily negotiates grades up to 32 per cent. Where tunneling is necessary, a 6 x 7-foot "rathole" is adequate. It crosses canyons and rivers on light catwalk trestles, yet it can carry upwards of 3,000 tons per hour in a continuous river-flow — with a three- or four-man operating crew.

Beyond this, Goodyear's new steel-cable belt now makes it possible to engineer overland systems with single belts up to five or six miles long on horizontal runs. This means fewer transfer points, less breakage of material in transit, less machinery and supervision.



ow savings make Good-
belt systems the
ent- lowest-cost-per-
a 6- mile carrier. For the
It ent, their use is re-
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ever located, will find a
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on to costly transport
les ems. For complete data,
the G.T.M. - Goodyear
ical Man - at Goodyear,
n, Ohio or Los Angeles,
rnia.

● White line shows
how a Goodyear belt
system can negotiate
rough country im-
possible to other high
capacity carriers.



-Specified

GOODYEAR CONVEYOR BELT SYSTEM

showing up-and-down-hill run without transfer
— an exclusive Goodyear engineering feature.

GOODYEAR

THE GREATEST NAME IN RUBBER

CWT



THEM!

You are looking at the Board of Directors of one of the busiest companies in the world. It is the firm of Gremlin, Widget & Finella, Inc.,* specialists in the new light-metal headaches — magnesium migraines, aluminum ailments and general alloy trouble.

As the Light Metal Age swings into mass production, this company finds itself with advance orders on hand for some of the biggest headaches in history, and already its record in the highly technical field of industrial interference is an impressive one.

One of the most notable achievements of G. W. & F. has been their handling of the weight factor in horsepower development. For years they have kept the ratio of pounds to horsepower high in all types of engines, and only the sheerest engineering genius has succeeded in producing one horsepower with slightly less than a pound of metal — yet 5 or even 10 horsepower may be possible with a pound of the right alloy.

Likewise, this new subsidiary of the Headache Trust has done some pretty whimsical and spectacular things

with metal, causing magnesium dust to explode, and the metal to dissolve back into sea water like so much salt. Bearings have been known to crystallize within a few hours from vibration alone, and the ideal bearing surface is one so hard that the cost of working it is still a major headache.

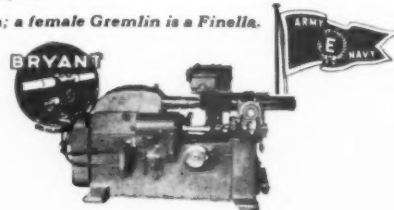
As specialists in internal grinding, we at Bryant have helped to cure many a new and serious headache in the working of light metals, super-hard alloys, and other new materials. We have helped to develop safer processes for machining light metals, improved methods of grinding and finishing the super-hard tungsten-content alloys, and new techniques for working such materials as hard rubber, glass, graphite, plastics, bronze and cast iron, as well as centrifugally cast steels and alloys from hundreds of new specifications.

If your business calls for the use of precision machine tools, Bryant's Consulting Service can be of greater value to you today than ever before. We urge you to "Send for the man from Bryant!"

*Subsidiary of the Gremlin Headache Trust. A Widget is a young Gremlin; a female Gremlin is a Finella.

Bryant Chucking Grinder Co.

Springfield, Vermont, U. S. A.



SEND FOR THE MAN FROM BRYANT

put is now worth around \$250,000,000, comes from a chain of factories employing more than 80,000. Until mid-1942, production was largely in trainer planes; now several factories are turning out bombers and fighters.

Canadian subsidiaries of American automotive companies were among the first converted to war production. When war broke out, their output was worth about \$120,000,000; it is now more than \$400,000,000. Besides mechanical transports, Canadian plants are producing armored combat vehicles at the rate of around \$160,000,000 a year.

• **Munitions From Scratch**—Ottawa's war production policy called for specialization in ordnance, requiring industry to start from scratch. But now the Munitions and Supply Dept. reports that Bren guns, Sten and Browning machine guns, rifles, and other small arms are coming out at the rate of three a minute—1,500,000 a year.

Altogether, twelve types of small arms are being manufactured and supplied to 50 destinations on the fighting fronts. Weapon output expansion has taken place largely in the last 15 months and is currently rated at \$185,000,000 a year, compared with less than \$25,000,000 in 1941.

• **Tool Steel Saved**—In the final stages of the World War, Canada was an important source of shells. At the outbreak of the present war, a few plants were converted to shell production which rose in value from \$15,000,000 in 1939 and 1940 to about \$250,000,000 this year. Canadian munition factories specialize in armor-piercing shells from low-alloy steel.

During 1943's first quarter, a number of new chemical and explosive plants have entered production valued at around \$125,000,000, almost three times that of 1941. About \$150,000,000 has been spent on new plants which are setting Allied records.

• **Shipbuilding's Record**—Canadian shipbuilding reached a substantial scale only 15 months ago but will be worth more than \$275,000,000 this year. Last year's launchings totaled more than 100 cargo ships and 300 light naval vessels, ranging from patrol boats to corvettes. Much of the heavier construction is done on the Pacific Coast where building time compares well with American records.

One of the most spectacular developments in Dominion war industry has been machine tools. When plants turned to war production they depended almost entirely on the United States and Britain for equipment. Now a large part of Canada's requirements is supplied from domestic plants which also ship substantial quantities of tools to the U. S., Britain, other Empire countries, and Russia.

• **Lend-lease Figures**—Canada has extended \$1,000,000,000 in lend-lease aid to Britain, Russia, Australia, and New



Keep Out Payroll Troubles with a Todd Form-Master

The Form-Master will give you all your payroll facts correctly, completely, and on time! Here's why:

- The Form-Master cuts payroll posting time in half, releasing employees for other work.

- A single fast operation posts employee's statement, earnings record and payroll sheet, all at one time. Since there is no copying from one form to another, the three records are always identical.

- Wage and Hour inspections won't be delayed... Social Security and other reports can be finished speedily—for the Form-Master produces, as a by-product of the original posting, all the payroll information every Governmental agency requires.

For more details,
mail the accompanying coupon

WHAT FORM-MASTER USERS SAY:

"After having used your payroll system for a period of about six months... we estimate our savings on labor by your system as high as 50%."

Haverhill-Bradford Corporation
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"It has saved us at least two days' time of two men working on nothing else but the payroll."

August Feine & Sons Company
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"We have found your system to be well worth its installation alone on the saving of labor normally required to post the employees' records for State and Federal taxes."

Del Mar Canning Company
Monterey, California



THE TODD CO., Inc., Rochester, N. Y.
I would like more information as to how the Todd Form-Master provides accurate, adequate, accessible and up-to-date records.

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BW-3-27-43



**The day the metal works
went out of business**

● There was plenty of time to save the plant . . . even after the flames caught the edge of that puddle of oil.

But someone hit the blaze with a water stream. Ten minutes later you could see the flames all over town.

In your shop you should have men who can handle extinguishers . . . who can pick the *right* one when fire strikes. Training provides the answer. *The best training is a well-run demonstration, where men see extinguishers in action, learn how to use them.*

Walter Kidde & Company is preparing a booklet—"How to Teach Fire-Fighting." It tells how to handle demonstrations effectively, how to set up fire tests, how to explain extinguisher action. Write now. We'll mail you a copy.

Walter Kidde & Company, Inc.

324 West Street

Bloomfield, New Jersey



Zealand in the past year. In proportion to population, this is comparable to \$12,000,000,000 worth of American lend-lease aid. This year at least another \$1,000,000,000 in lend-lease goods is expected to go from Canada to other United Nations.

Canadian shipments to Russia have included \$50,000,000 worth of tanks, and more than 400,000 other military vehicles have been sent other United Nations.

Cradle-to-Grave

Former Beveridge aide offers security plan to cost \$900,000,000 a year, but final action is unlikely this year.

OTTAWA—Like Britain and the United States, Canada is moving toward a postwar cradle-to-grave social security system. The parliamentary committee on social security last week received an outline of the subject prepared by 37-year-old Dr. Leonard C. Marsh, one time assistant to Sir William Beveridge, author of the British plan.

● **Quarter of War Cost**—The plan would cost an estimated \$900,000,000 annually—about one quarter of the Dominion's current annual outlay on war and about 12% of the present national income. Of this cost, \$500,000,000 would be a charge on the federal treasury and \$400,000,000 would be levied against beneficiaries and employers.

Proposed benefits include: (1) enlarged unemployment insurance; (2) health insurance with medical and dental care; (3) children's allowances; (4) old age and disability insurance; (5) sick benefits; (6) maternity allowances; (7) funeral expenses.

● **Paying the Bill**—Marsh distributes the contributory part of the cost as follows: 75¢ to \$1.85 a week by wage earners; 90¢ a week by employers for each employee; 75¢ to 90¢ a week by farmers and others self-employed.

Federal contributions would vary according to the economic position of the beneficiaries. Persons in upper income brackets would be responsible for the entire cost of benefits. For persons in the lowest income class, the state would cover all costs. Every gainfully employed male, married or single, would be required to make contributions sufficient to finance benefits for two persons. The contributions of heads of families would vary with the number of dependents.

● **Range of Benefits**—Child benefits would range from \$5 a month for those up to 4 years to \$12.50 for those between 15 and 16 years. Maternity benefits would commence six weeks before childbirth and continue for six weeks

"SI PUDIERAMOS...LO HARIAMOS"



EXPLANATION

"If we could . . . we would." Experiencing wartime passenger congestion, Pan American Airways in an advertisement placed in a number of South American newspapers explains that it is willing but unable to maintain normal flight service.

after. The standard rate of old age pensions would be \$30 a month with an additional \$15 for a wife. Funeral benefits would range from \$25 for children to \$100 for adults, with total cost placed at \$10,600,000 a year.

Ottawa will not act finally on overall social security this year, but a separate health insurance law may be enacted. The social security committee is studying a plan calling for federal grants to provinces which set up their own health insurance schemes. Object of the federal-provincial proposal is avoidance of the necessity for a constitutional amendment to transfer jurisdiction from the provinces to the Dominion. Cost of the federal assistance plan is placed at \$256,000,000 a year.

CANADIAN IRON FINANCED

Financing of the big Steep Rock iron ore project in northwest Ontario (BW—Oct. 24 '42, p. 79) has been completed, and plans are being pushed to speed the development. Private financing of \$2,500,000 in the United States will be supplemented by the Reconstruction Finance Corp. up to \$5,000,000.

The Ottawa government is putting up \$2,500,000 for a loading dock at the head of the lake to be built by Canadian National Railways, and the Hydro Electric Power Commission of Ontario is spending \$1,600,000 on a power line from Port Arthur to Steep Rock. In addition, the Canadian government is granting a subsidy of 20¢ a ton on initial ore shipments.

Ottawa and Washington have agreed on materials priorities, and production is expected to begin in July, 1944.

Business Week • March 27, 1943

CONTROL



Control...
the Critical Factor
in Minesweeper
or Steel Casting

UNGLORIFIED . . . rarely mentioned by headlines unless it is to record her destruction . . . the minesweeper goes quietly and methodically about her task of clearing from ship channels the hidden

terror whose touch is death. Only through rigid control of navigation can the minesweeper gain success in her perilous task. ☆ The modern production of instruments of war must be as closely controlled as the minesweeper's navigation. The Lebanon Steel Foundry—producer of castings for America's armed forces—employs every production control that furthers approved foundry practice . . . human, chemical and mechanical. To develop sound castings, Lebanon uses two of modern industry's most scientific tools—the x-ray (illustrated) and the gamma ray. ☆ There is a premium on control—and Lebanon pays it to assure American fighting men and American industry of castings as fine as any in the world . . . castings of Circle L integrity . . . castings that are specified by such acknowledged industrial leaders as Darling Valve and Yale & Towne.

LEBANON STEEL FOUNDRY, LEBANON, PENNSYLVANIA

ORIGINAL AMERICAN LICENSEE GEORGE FISCHER (SWISS CHAMOTTE) METHOD

LEBANON  *Stainless and Special Alloy*
STEEL CASTINGS

Remember these LIFE pictures from the fighting fronts?

No citizens far behind the fronts on which their fate was being decided ever knew the sight and smell and flavor of battle as do today's Americans.

For never before has the documentary record of war been set down with such fullness and clarity as is being done by the lenses of LIFE's photographers.

But bringing people the story, through pictures, of what is happening in this war involves considerably more than the clicking of a shutter at an amazing or interesting phase of warfare.

Rather it means a LIFE of battle-wise photographers whose initiative and know-how are getting them to the newsworthy spot at the right moment. But getting to the spot is only the beginning.

For it also means the knowledge of how to make a picture story... how to get a series of pictures that will make LIFE readers feel they have actually eye-witnessed the great events taking place at the front.

One of the chief reasons why LIFE is a strong force in war news-reporting is because it has such an able

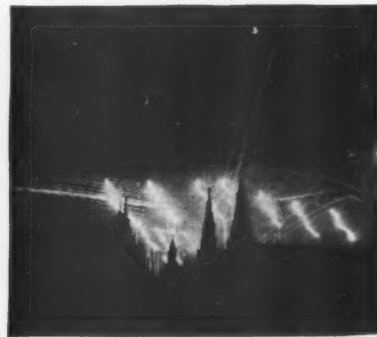
staff of photo-journalists on every fighting front. Twelve of these photo-journalists are shown here. Wherever the news is happening, their pictures are telling millions of Americans the realistic story of the war as it has never been told before.



CARL MYDANS, on LIFE's staff since it began, has photographed more wars than any other photographer. His stories about the peacetime home front, too, have been distinguished examples of the new photo-journalism. Here—in his last LIFE story before he and his wife Shelley, LIFE researcher, were captured by the Japanese—he shows Japs being rounded up by Filipinos on first day of war.



DMITRI KESSEL, in an Army plane just a few miles off the Florida coast, caught this burning tanker, victim of Axis attack. Famed for his aerial photography and color work, Kessel infuses an imaginative quality into his composition and has exhibited in many one-man shows before thousands of admirers of his photography. Now Kessel is at sea on his way to some foreign war zone.



MARGARET BOURKE-WHITE, the only foreign photographer there when the Nazis invaded Russia, took many pictures like this of the Moscow blitz. At an early age she started picturing such unlady-like things as mills and oil wells, has been making photographic history ever since. Recently in North Africa she became the first woman ever to accompany a bomber mission.



RALPH MORSE'S great documentary series appeared in LIFE under the caption, "Guadalcanal: Grassy Knoll Battle." Few pictures in any war have brought home so violently the stench, disease, filth and discomfort of these boys in the jungles. The above shows Marines preparing to leave Guadalcanal after U. S. victory. Morse is now with the fleet, position and destination unknown.



ROBERT LANDRY found this badly wounded tank officer in a desert dressing station, smiling and game. Landry traveled 22,000 miles with U. S. task forces, has reported from almost every war front. After picturing for LIFE readers the hardships of desert warfare, he is now en route to Iran, Iraq and Arabia, far from Hollywood where he has done so many stories of glamorous stars.



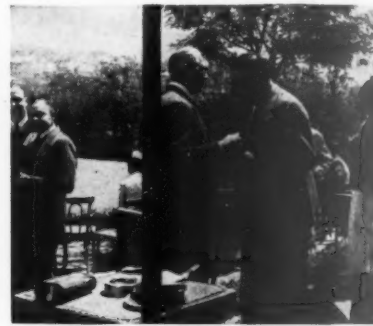
FRANK SCHERSCHEL, at Midway Island last year, showed how American soldiers are building many a desolate sand spit into bastions of American defense and offense. The above, from his story of an Atlantic convoy, shows a direct hit on a Heinkel III torpedo bomber. Scherschel ducked as it passed to crash into the sea. At present his whereabouts is known only to the Navy.



ELIOT ELISOFON was there, sending back graphic camera reports for LIFE readers when the allies captured Sened, Tunisia. His coverage of the Finnish war gave him valuable background experience for reporting World War II proper. Elisofon has done much teaching and lecturing on photography and is one of the best-known practitioners of the "multiple flash" technique.



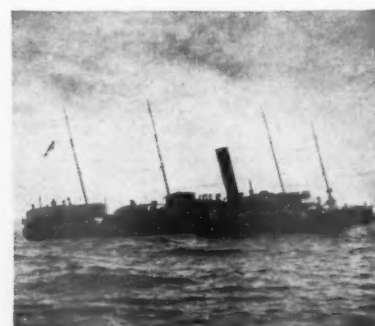
WILLIAM VANDIVERT whose picture-report, "The Bombing of London," provided LIFE readers with a graphic record of what Britons meant by "taking it," has photographed more of war at first-hand than most men. He covered Italy's invasion of Albania and Hungary's entry into Ruthenia, flew with the RAF and reported the great 1940 raids in England. He is now in Poona, India.



HART PRESTON, 33-year-old Stanford graduate, sent back this photo of slippery German Ambassador Franz von Papen in Ankara, Turkey. To many it spoke more eloquently than a thousand-word essay of the diplomatic struggle going on in that neutral country. Preston was LIFE's first resident photographer in Rio de Janeiro, is now reporting from Johannesburg, South Africa.




GEORGE RODGER, 34-year-old LIFE photographer, brought to Americans the first pictures of the shark-faced fighter planes of the legendary "Flying Tigers." gave readers a thrilling conception of what American airmen could do against numerically superior Japanese forces. He has since reported from Africa, Rangoon, the Near East—is now with the LIFE staff in his native London.



DAVID SCHERMAN, among the youngest of LIFE's photo-journalists, met quick action on his first foreign assignment when the Egyptian liner ZamZam was sunk from under him by the Germans. This picture, smuggled in a tooth paste tube, was one of many to appear in LIFE. Now in England, where he photographed many phases of the blitz, Scherman remains there to report.



GEORGE STROCK has traveled far since he got his start operating a trick-portrait concession at Venice, Cal. Few cameramen have risked their lives as did Strock in photographing, "The Battle of Buna" (Feb. 15). These thrilling pictures, several taken at the moment of killing, have a realism that takes the reader out into the hostile jungle within reach of the sniper's bullet.



QUICK ACTION ON
ENGINEERING PROBLEMS

MANAGEMENT
DESIGN
CONSTRUCTION

**SANDERSON
& PORTER**

ENGINEERS AND CONSTRUCTORS

52 WILLIAM STREET
CHICAGO · NEW YORK · SAN FRANCISCO



It's in the Bag!
— AND HUNDREDS
OF OTHER ITEMS

From handbags to tanks, planes and ships, Franklin Liquid Hide Glue is speeding production of civilian and war goods. For this revolutionary glue comes ready to use. Simply pour it out of the drum and start gluing. No mixing, heating or preparation. No chilled joints. No evaporation or waste. If you do wood gluing, you need Franklin.

FREE SAMPLE on request. State how glue is to be used.

THE FRANKLIN GLUE CO.
COLUMBUS, OHIO

Every Drop Works!
FRANKLIN
Liquid Hide GLUE

MARKETING

Grocers Muscle In

And this time druggists can't retaliate, for there are no food lines to stock. Supermarkets lead expansion parade.

The drug store—traditional catchall of American merchandising—is jealous of its versatility. But right now, with every kind of retailer greedy for every kind of goods available, druggists are hard-pressed to preserve their reputation for merchandising innovation.

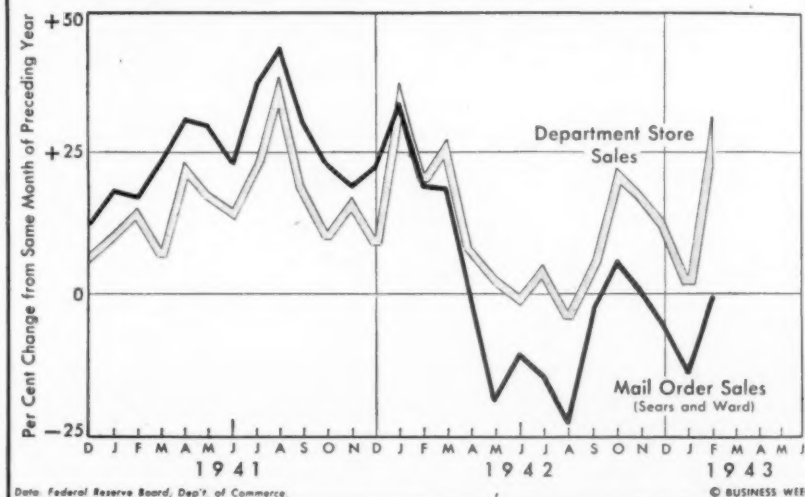
• **A Twenty-Year War**—Hottest on their heels in the race for merchandise are their old enemies, the grocers. The feud between the grocer and the druggist, currently fanned to white heat, dates back to the last war, which marked the beginning of mass merchandising and the expansion of the big food chains. But it was the depression that really

brought desperate raiding on both sides. Items like toilet soap and cleansing tissue, once exclusively drug lines, became equally familiar on the grocer's shelf. Druggists countered by marketing products like coffee, jam, and jelly.

That competition was born of the scramble for sales and customers in the lean years, and it waxed hotter between chains in both trades than between independents, who, out of neighborliness, were more apt to respect each other's trade areas. The line of demarcation continued to be a constant bone of contention, but the controversy cooled off somewhat with the return of a reasonable prosperity for both classes of tradesmen in the late 'thirties. Customers aplenty relaxed the scramble for sales.

• **Enter Merchandise Scarcity**—However, the old rivalry never died. And this year as retail druggists and food men face another type of scarcity—merchandise—the race to replace old lines now rationed or nonexistent with what-

MAIL ORDER HOUSES SUFFER



Sales of the nation's department stores in 1942 were 12% higher than in 1941, while sales of the two largest mail order houses—Sears, Roebuck and Montgomery Ward—were 2% lower. So far this year the contrast has been even more marked. Principal explanation offered by the mail order companies to account for this phenomenon is that they have always depended to a much greater extent than the department stores on sales of consumers' durable goods. Hence, when production of such items as tires, ra-

dios, refrigerators, etc., was halted by WPB, and after available stocks had run out, the business of mail order firms was much harder hit. Thus Sears' and Ward's retail stores were harder hit than the mail order business because in the stores consumer durable goods, as contrasted with "soft line," have been relatively more important. Another possible explanation is that buyers are trading up. When a consumer's income goes up, he turns to the higher-priced merchandise of the general department stores.



The Baker Was a Wise Man

The Baker was a wise man when he counted thirteen to a Baker's Dozen. He gave full value, and a little more. It is an idea to which this company heartily subscribes. We are never satisfied until we, too, can give full value, and then a little more.

We constantly strive to reduce our use of critical materials, to lower our costs of manufacturing, and to improve rigid standards even beyond required demands.

The switch housing illustrated was originally made of steel; then redesigned in die-cast metal; then, for lighter weight, in aluminum. Now we have once more redesigned it in plastic form, which is even lighter than aluminum, yet affords the protection that must be provided for aircraft and other uses.

The four steps in the sequential designing of this switch housing also

If you manufacture a product which involves precise control, we will be glad to send your engineers as many copies of our Handbook-Catalogs as you may desire.



forecasts our attitude toward the coming post-war period. For then the advantages of MICRO SWITCH—its small size, preciseness, accuracy, long life, and dependability, which have proven so valuable in the test of war—will find a place in the designing of household equipment, in the broad expansion of the utility field; in the new, broad field of electronics; and in many others.

We cannot emphasize too strongly that MICRO SWITCH is our trademark and this trademark appears on every switch we produce. The trademark MICRO SWITCH is our property and identifies only switches made by Micro Switch Corporation.

Micro Switch Corporation, Freeport, Illinois
Branches: 43 E. Ohio St., Chicago • 11 Park Place, New York City
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M I C R O S W I T C H

Made Only By Micro Switch Corporation...Freeport, Illinois




Taking Bad Pictures Is His Business!

YOU wouldn't think a photographer could keep a job if he took bad pictures all the time, but we have a trained crew of ace cameramen who do just that.

They're on duty night and day checking freight shipments for errors and oversights in packing and loading that might result in damage or delay. They climb in box cars, peer over the sides of gondolas, circle flat cars. They get in anywhere and everywhere they think they may find a poor package, a split crate, or a broken carton. And when they do find such a condition, they photograph it and make suggestions on how to eliminate the danger in the future.

The net result is better shipping, less waste, and lower costs in the swift handling of mountains of war materials and essential civilian goods. And the services of these trained men, together with the advice and assistance of Erie's loading and packing specialists is available to any shipper—not only during April, which has been designated as perfect shipping month—but all year round without cost or obligation.



23,578 FREIGHT TRAINS DAILY

1,408,964 FREIGHT CARS DAILY

25,000,000 NET TONS DAILY

AMERICAN RAILROADS AT WAR

THE RAILROAD OF HELPFUL SERVICE

ever they can find has made the controversy burn hotter than ever.

The tough thing about it this time at least for the drug trade, is that isn't a mutual encroachment, which can be settled steal for steal or by a reciprocal hands-off policy. Druggists know this is no time to enter the food business, even in retaliation for grocery invasion not only of the pharmaceutical field but also of the general merchandise lines which account for approximately 50% of drug store business. Instead druggists are concentrating on more logical expansion into what soft lines they can find.

• **Room for Expansion**—Grocers generally find themselves in a happier plight for there is still a variety of merchandise left for their exploitation. Manufacturers and wholesalers in a wide range of nonfood lines are beginning to realize the increasing importance to gasoline rationed customers of doing all of the shopping under one roof. Supermarkets with traffic counts averaging 5,000 to 25,000 customers a week, represent an increasingly attractive market. Supermarkets, particularly the big, aggressive ones in Southern California and Texas which have been pushing nonfood lines since depression days (BW—May 13, p44), are seeking to capitalize their opportunity. Supermarket Merchandising is anxious to see that its readers miss no bets, recently recommended this list of goods for a starter: nail polish, rouge, lipstick, aspirin, laxatives, shampoo, alkalizers, shoe strings, thread, eyebrow pencil, glue, ink, bandages, adhesive tape, toothpaste, shaving supplies, stationery items, hand lotions, hair oil, cold remedies, combs, and face powder. To this list might be added vitamins which many grocers are using to take up the sales slack.

• **Wanted: Fast-Sellers Only**—Experienced supermarket men emphasize the importance of national brands and of commodities suitable for self service. Most successful enterprises thus far have been small departments for drug and magazines. With an increasing number of workers carrying lunch boxes, sales of paper items, such as napkins, cups, and sandwich envelopes, have boomed. Baby goods and toy departments are thriving in this year of record births (BW—Mar. 20 '43, p40). Other lines that have proved worthwhile are stationery and household utility items. Another new long-profit line is wine.

Supermarkets in the East are also plugging holes in their stocks with nonfood lines. For example, in Boston, when the Economy Grocery Stores' Stop and Shop Market lost about 20% of its business to rationing, it jumped immediately into nonfood lines like glassware and drugs. The market now displays brushes, waxes, clothesline rope, floor polish, candles, and about 250 drug

There is still a Rubber Crisis in 1943

It is true that you no longer need a ration certificate for recaps.

It is true that the Government has cut through all red tape to make it easier for every citizen to keep his war car rolling for essential driving purposes.

If you wear your tires down too thin so that they cannot be recapped . . . if you fail to keep your tires properly inflated and in good repair . . . the whole rubber situation could change overnight.

You would need new tires and the entire objective of the Government's campaign would be missed.

There can be no let-down for the military needs.

There is not a man, woman or child in America that wants to take an ounce of rubber needed for a son or a brother at the front.

To go from the present recapping program to the building of new tires would mean that our armed forces would have to do without the equipment they need.

It is the intent of our Government to put more and better planes into the air; more and better tanks on the ground; more and better ships on the sea than anything that the Axis can produce.

This is not only to win the war, but to shorten the war—and to save the lives of American boys.

You make this possible by doing your share . . . by not allowing your tires to wear down too thin . . . by driving under 35 miles per hour . . . by keeping your tires inflated properly . . . by seeing that the necessary repairs are made when they should be.

The Baruch report stated that we were going to hit the bottom of the rubber stockpile in 1943. That bottom comes nearer and nearer.

Recognizing this fact the Government has worked out a program that will still keep our cars rolling for essential driving.

Let's do our part.



RECAPPING 1. After a thorough inspection of the tire inside and out to determine whether it is fit for recapping, all necessary repairs are made. The old tread is then buffed smooth to prepare it for a coat of special rubber cement.



2. The new tread, called "camelback," is carefully applied to the sticky surface of the tire and rolled down under pressure to squeeze out any air bubbles that could cause trouble later on. This "camelback" is made from reclaimed rubber processed from the scrap rubber.



3. The "cure" bonds the new tread to the old. Great skill is needed in maintaining the rigid factory controls necessary. Such quality recapping, using wartime materials, will give good service if air pressures are kept up to 32 lbs. and speeds kept down below 35 m.p.h.

Things you can do to save every ounce of rubber left in your tires

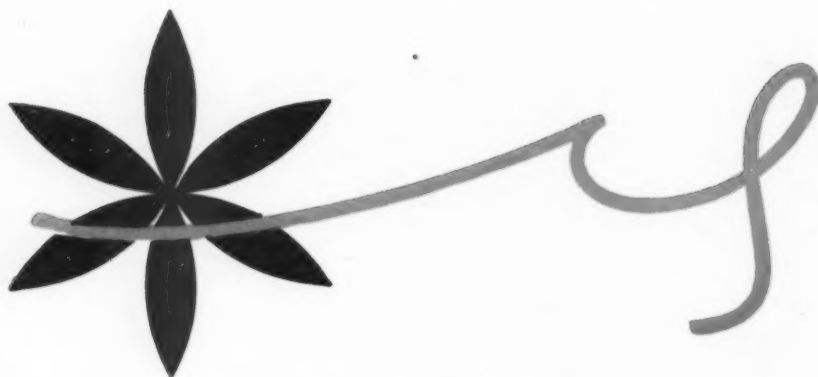
1. Never drive unless it is absolutely necessary.
2. Never drive alone . . . Share your car.
3. Have your tires recapped in time to save them.
4. Have your tires inflated every week or two.
5. Baby your tires . . . Start and stop slowly; slow down on curves.
6. Avoid curbs, ruts, especially pavement-breaks, now more serious because of wartime necessity.



UNITED STATES RUBBER COMPANY

ROCKEFELLER CENTER, NEW YORK CITY—In Canada, Dominion Rubber Company, Ltd.

Everything for the front—for a better America tomorrow



HE KILLED

THE STARRY-EYED ASTERISK

... on the morning of March 9th. The Editor got the idea of the asterisk as he was editing a news-report on electronics. He sent the story back to the Desk with the suggestion that thereafter a star be added to the headline of each BW story which held facts for postwar planners. And that the star lead to a footnote saying:

Many BW news-reports are "postwar material" in the sense that they reveal to management-men how the shape of the postwar world is being hammered out by the impact of events, ideas, and personalities on the malleable world of today. From time to time, however, a news-report deals explicitly with postwar prospects. In such a case it is, like this one, "starred for postwar thinking."

But, as story after story ran across the Desk that day, he and the Managing Editor re-realized that all BW news deals explicitly with postwar (to the management-man, post-present) planning . . . that it is all packed with facts that stimulate readers who must chart a course for business enterprises, who must have capacity for foresight, men who have brains, money or anything else to invest in the future of America.

So the Editor killed the asterisk. It was a good idea, but it didn't fit.



News that is caviar to the general reader
is bread-and-butter to the BW reader.

News-base of Management's Decisions

items including hair tonic, shampoo, Barbasol, Kotex, and milk of magnesia.

• **I. G. A. Adds Drugs**—Largest of the voluntary chains, the Independent Grocers Alliance recently has added about 70 drug-store items and is also planning a separate line of baby supplies introduced to go with the baby food section.

Such expansion of lines is not, however, common to the whole trade—at least not yet. The big corporate chains like the Great Atlantic & Pacific Tea Co. and Safeway Stores still think they have enough to do handling food under wartime's complicated marketing conditions; also they seek to maintain their identity as food stores exclusively. They reason simply that even in a threadbare economy they will survive as long as the buying and selling of food survives—and that means for the duration.

• **Druggists Seek Aid**—Hard put for a weapon with which to fight off aggressive merchandising policies of grocers, the National Assn. of Retail Druggists recently appealed to pharmaceutical houses and manufacturers to give them priority over nondrug outlets in the scramble for supplies. But such tactics might invite scrutiny from the Dept. of Justice or the Federal Trade Commission on the suspicion of antitrust law violation, and the druggists have enough trouble of that kind on their hands already as a result of their indictment, charging misuse of the fair trade price maintenance acts to effect monopolistic price controls.

Druggists do have some hope of help from OPA since Price Administrator Prentiss M. Brown suggested that manufacturers refuse to supply new accounts with scarce goods, except in areas where service to another dealer has been abandoned or where increases in population warrant new outlets.

• **Pharmaceutical Boards Relent**—Aggressive grocers have even begun to break down the protection of medicinal lines formerly assured druggists by state pharmaceutical boards. For example, on a petition from local grocers, the California state Board of Pharmacy has ruled that adhesive tape, corn plasters, cotton bandages, and absorbent cotton are legitimate items for grocery shelves, but the board refused to allow nondrug outlets to carry aspirin, mineral oil, citrate of magnesia, hydrogen peroxide, boric acid, epsom salts, and iodine, declaring these items "unsafe" for general sale. Miffed grocers point out that the state board allows general sale of slower-moving retail items such as sulphur, alum, and blue stone (poison).

A bill that would deny general retail merchants the right to sell drugs or medical supplies was dropped last year in Kentucky after a legislative gag man proposed an amendment preventing drug stores from handling general merchandise.



Another "Supply Line" the Axis forgot...

CIVILIAN SUPPLY SERGEANTS *of the War Production Front*

EVEN the American Public hasn't fully realized what has been going on behind the scenes in our vast armament program. True, we know about the big munitions industries, the men and women who are making tanks and guns, ships and shells, the planes and other direct implements of war.

But it goes deeper than that. Back of these groups are others—equally vital—groups whose loyalty, enthusiasm and hard work have helped to build these plants and keep them going full tilt.

Let's turn the spotlight on the men of America's Wholesale Supply Houses and the part they have played in getting our new war plants into record-breaking production.

War-Workers of the First Order

The part that Wholesale Supply Houses and their men are playing in equipping plant additions and keeping machinery maintenance supplies flowing is a vital war service. These are the civilian supply sergeants of the production front...

without whom our tremendous war output would bog down. They are the men of the electrical wholesalers, the mill supply houses, the steel warehouses, the hardware jobbers and the like.

In the Electrical Supply Houses of our industry, these men and women have kept the flow of wire, switches, conduits, fuses, transformers, and other war essential materials streaming into the plants on schedule... meeting emergencies with a speed that is part of the American miracle of getting things done.

GENERAL CABLE CORPORATION

MANUFACTURERS OF BARE AND INSULATED WIRES



AND CABLES FOR EVERY ELECTRICAL PURPOSE

HEWITT RUBBER UPS OUTPUT 75% TO NEW HIGHS

ON VITAL SELF-SEALING FUEL TANKS



It was an urgent demand—self-sealing fuel tanks in greatly increased volume to keep pace with the production of combat planes...

Hewitt, "specialists in rubber," accepted the assignment...went to work with Plocar engineers, "specialists in production."

"Results," states Thomas Robins, Jr., President of the Hewitt Rubber Corporation, "have been exceedingly satisfactory. What seemed the impossible has been accomplished. Production kinks were straightened out, existing equipment and space utilized more efficiently; the cost and delay of new buildings was avoided. Output reached a level nearly double our best previous record and is still on the upgrade."

Full cooperation—plant engineers with the Plocar staff—contributed in a large measure to this achievement...Similar Plocar assistance is available to plants faced with production problems. Write,

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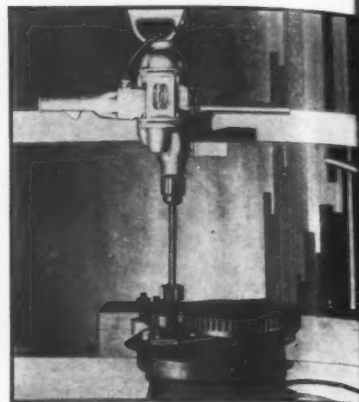
Representatives in principal industrial areas

BUSINESS AND INDUSTRIAL MANAGEMENT CONSULTANTS



In cooperation with

PLOCAR ENGINEERS



EMERGENCY LIFT

Needing a hoist in a hurry, a contractor drafted his Black & Decker drill for the job—welding a gear to a long shaft held in the chuck. The hoist has a lifting capacity of 1,000 lb.

Nugent Plan Tried

RCA joins those proposing to sell industrial equipment now for postwar delivery, offers sound devices to theaters.

The so-called Nugent plan of paying now for things you want to have after the war (BW—Jan. 30 '43, p7) has never received an official blessing, but variants of the scheme are being adapted to sale of industrial equipment.

Makers of equipment for garages, gasoline stations, and bottling works, for example, have conducted experiments. Now Radio Corp. of America announces a postwar priority plan.

• **For Sound Equipment**—RCA proposes to let theater owners contract now for the first sound equipment to be delivered after war's production restrictions are lifted. Exhibitors may make deposits on postwar orders in weekly or monthly instalments in which a total of 20% of the estimated purchase price is required. If payment is made in cash, only 10% is required.

Interest paid on such deposits by the company applies on the purchase price unless the contract is canceled, in which case interest is paid to the theater operator.

• **The Growing Demand**—RCA points out that population shifts already are causing demands for many new theaters consequently, by the time the war ends thousands of motion picture exhibitors will need new equipment. With reconversion complicating production, the company estimates that such a large postwar demand may swamp manufacturers for as long as two years.



Official U. S. Navy Photo

LOOK OUT FOR LANDLUBBERS!

An "ashcan" ploughs the depths to destroy an enemy sub. A shell is fired. A bomb dropped. Enemies fear the seamanship of our straight-shooting, hard-hitting Navy. Yet, strangely enough, many of its ablest men come from inland states.

And—in hundreds of towns that never saw the sea other Americans are laboring to produce the thousands of parts to be assembled into guns and shells. Into ships and subs. Into marine power plants and sea planes . . .

Close by each of these war production plants is a convenient source for fine lubricants . . . one of Texaco's more than 2300 wholesale supply points. Also on instant call . . . Texaco's specialized engineering service . . . to assure full operating efficiency and economy.

THE TEXAS COMPANY



FLUID TRANSPORT

The Nation's 5th Carrier...



PIPE FITTINGS

WASHING 50,000 FACES is a major job of FLUID TRANSPORT. Imagine building a city the size of Battle Creek in a few months... that will give you an idea of the complexities of constructing the piping for sanitation in a typical army camp.

Piping systems like that define the true function of Grinnell FLUID TRANSPORT, which includes the supplying of all the connecting links for converting a pile of pipe into a complete piping system.

For war construction, or maintenance and repair of existing piping, call Grinnell Company, Inc., Executive Offices, Providence, Rhode Island. Plants and offices throughout the U. S. and Canada.

GRINNELL

WHENEVER PIPING IS INVOLVED



Coil Spring Hangers



Pipe Hangers



Prefabricated Piping

Co-op Stratagem

New York league would institute private milk subsidy to cut price differential enjoyed by independent dairy farmer.

One of the strangest wartime regulations ever concocted is well on the way toward getting official sanction. It is, in effect, a subsidy for middlemen who handle the product of the New York milk shed. What makes it strange is that the subsidy, to be paid by the dairy farmer to the distributor who buys his milk, was proposed by the most powerful organization of dairy farmers in the area—the Dairymen's League Cooperative, which produces, processes and distributes milk.

• **Minimum Prices Set**—This believe-it-or-not proposal is the latest stratagem of the co-op in its perennial war with big private firms like Borden and Sheffield. These firms are required by the federal milk marketing administrator to pay to dairy farmers a specified minimum price for their milk; they dare not let their payments sink below that.

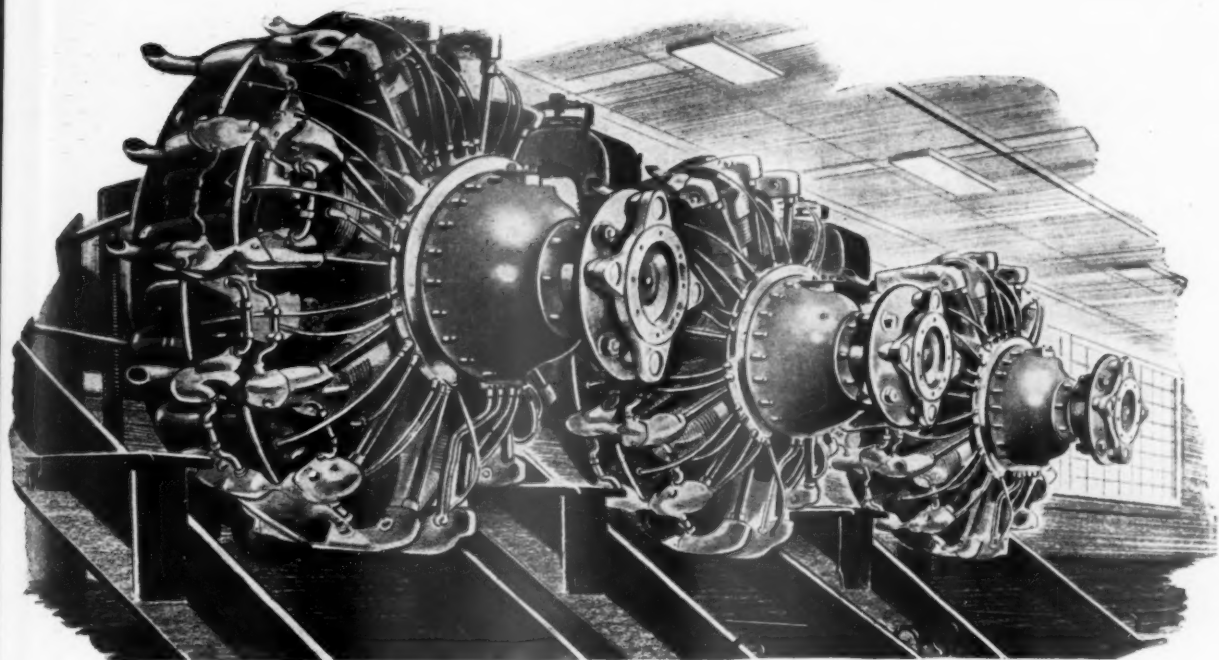
On the other hand, prices paid by the co-op to its members are not regulated; the Dairymen's League Cooperative can, and sometimes does, pay its members less than the private handlers pay their suppliers. The co-op farmer naturally envies the price stability of his neighbor who sells to Borden's.

• **Narrow the Differential**—Hence when leaders of the league proposed last week to the federal milk marketing administrator that the dairy farmer be required to pay a subsidy of at least 17¢ per hundredweight to his middleman for any milk the middleman diverts to manufactured products (cheese, ice cream, milk powder), the trade felt certain that the league was determined to narrow the differential, if not close it entirely, between the amounts paid co-op farmers and those which Borden and Sheffield pay their suppliers.

The farmer actually will not "pay" a subsidy to his milk handler; he will receive a minimum of 17¢ per hundredweight less for whatever portion of the milk he sells that is diverted by the handler into manufactured products which amounts to the same thing. There will be no limit to the amount of milk the handler may divert, and the minimum prices now prevailing on milk for human consumption will remain.

• **Changing Pockets**—The subsidy will not alter the financial position of the co-op member. If he receives less for his milk from the league, he will profit in the ultimate divvy-up of the league's income. He will be transferring money from one pocket to the other.

The co-op member thus will enjoy an



THOUSANDS OF 'EM "WEANED" ON AIR OF THE SAME TEMPERATURE!



RADIAL COMPRESSOR

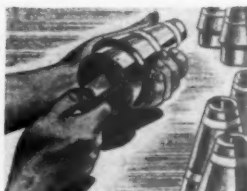
Sealed in test cells, all new aircraft engines are "weaned" on air of the same constant temperature. And in this test, which assures identical performance for each engine, Chrysler Airtemp Radial Compressors play a vital role in holding temperatures right "on the beam" for aircraft manufacturers.

Throughout the aviation industry, Chrysler Airtemp temperature and humidity control is being used to get fine precision, provide dust-free assembly rooms, as well as prevent rust and corrosion of raw and finished parts.

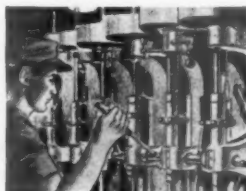
Chrysler Airtemp is war engineering its time-tested temperature and humidity control equipment to meet the requirements of countless other war industries. Many of them are described in a new booklet, CHRYSLER AIRTEMP AT WAR. Write for your copy today.



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Please send me, without obligation,
"Chrysler Airtemp at War".

Name

Firm

Address

advantage over the nonmember, who will also receive less for that part of his milk that the middleman diverts to manufactured products but will participate in no divvy-up. And that will tend to equalize the position between members and nonmembers.

• **Depression Formula**—The league can thank the depression for this ultrafancy format. During the dark 'thirties the farmer's abundant milk crop had to be moved somehow, wherefore a system of "diversion payments" was worked out—that is, the farmers paid the handlers, or middlemen, so much per hundred-weight to push excess milk into manufactured products. It is essentially this formula (abolished since war upped demand) that the league wants to revive.

Borden and Sheffield already are asking that the subsidy be confined only to milk used in manufacturing government-desired items. That would cut aggregate subsidy payments down considerably. Also, the two private giants are hinting that if there is to be a subsidy, less than 15¢ is plenty. At that figure, Borden-Sheffield farmers may not get sore, and the league may be unable to equalize prices.

• **Quid pro Quo?**—But the league is going to be tough to beat down. Of the 55,000 farmers in the New York milk shed, 19,000 are league members, and other smaller co-ops are solidly behind the league's stand. Furthermore, Washington observers are certain that the league got Secretary of Agriculture Claude R. Wickard's nod on its proposal in return for throwing its weight behind him in his various tribulations.

But insiders declare that if the league wins, and if Wickard sanctioned the proposal, the secretary has made a bad bargain. For milk diversions may grow to such size that the retail market will suffer another stunning shortage. And manufacturers' profits will be enormous. For whenever a middleman also happens to be a manufacturer, he will get a 17¢ subsidy on top of the 25¢ premium the government is already paying him to acquire enough milk to satisfy military and lend-lease requirements.

• **No Retail Price Drop**—As if Wickard's potential New York troubles weren't enough, it became apparent last week that New York will not be able to drop the retail price of milk a penny on Apr. 1. Wickard had demanded this price drop in January (BW—Feb. 6 '43, p64), saying that it could be brought about by a thorough defrilling of the distribution system.

But it develops that the only way to do any real defrilling is to pool the delivery system and abolish daily service. That would automatically mean a scrap with the teamsters' union, and thus far nobody has the stomach for such a fracas. To make matters worse, the same situation prevails in Boston, Duluth, and Chicago.



During 1943 the Commodity Credit Corp. expects to buy 65,000,000 lb. of tea from Great Britain under a war-time tea agreement. The first ship-

ment is examined in New York by (left to right) E. P. Connette, Charles F. Hutchinson, and E. Vere Powers, government experts.

OPA Watches Tea

Although imports are off 50%, tea rationing is not yet in sight; but price and packing controls are ready.

Tea will be rationed, but not in the near future. To be ready when necessary, OPA is studying the mechanics of an admittedly tough problem. Imports for civilian use are down to about half the prewar shipments of 100,000,000 lb. a year, but, until recently, inventories have met the deficit.

• **Supply Is Rising**—Retail stocks were drained from 20,000,000 lb. to 5,000,000 lb. during 1942. They are beginning to climb, and rationing can be expected when stocks are built up sufficiently. Tea supplies appear to be adequate, according to Ben Wood, director of the Tea Bureau, Inc., a trade association. However, rationing will be necessary when cocoa joins coffee on the controlled list.

Rationing of tea will be a headache because tea is not the universal drink that coffee is. By and large, coffee gets 90% of the breakfast market and splits the lunch and dinner demand with tea. Regional differences in consumption are marked. New York and New England consume two to four times as much hot tea as Dixie, making any ration quota inequitable between the North and South.

• **Britain Controls Sources**—Broadly speaking, the shortage of shipping is not the limiting factor on the American tea

supply. Ceylon's shipping quota has been increased because sufficient tea is not available at docks in India to fill its quota. The trouble in India is due to transportation and labor difficulties in getting the crop from the hills to seaports.

During the remainder of the war Great Britain will buy all the available supply from Ceylon, India, and Travancore (Southern India) and resell it at fixed prices to government agencies of the United Nations. Acting for the United States, the Commodity Credit Corp. expects to buy 65,000,000 lb. during 1943. This total includes military requirements.

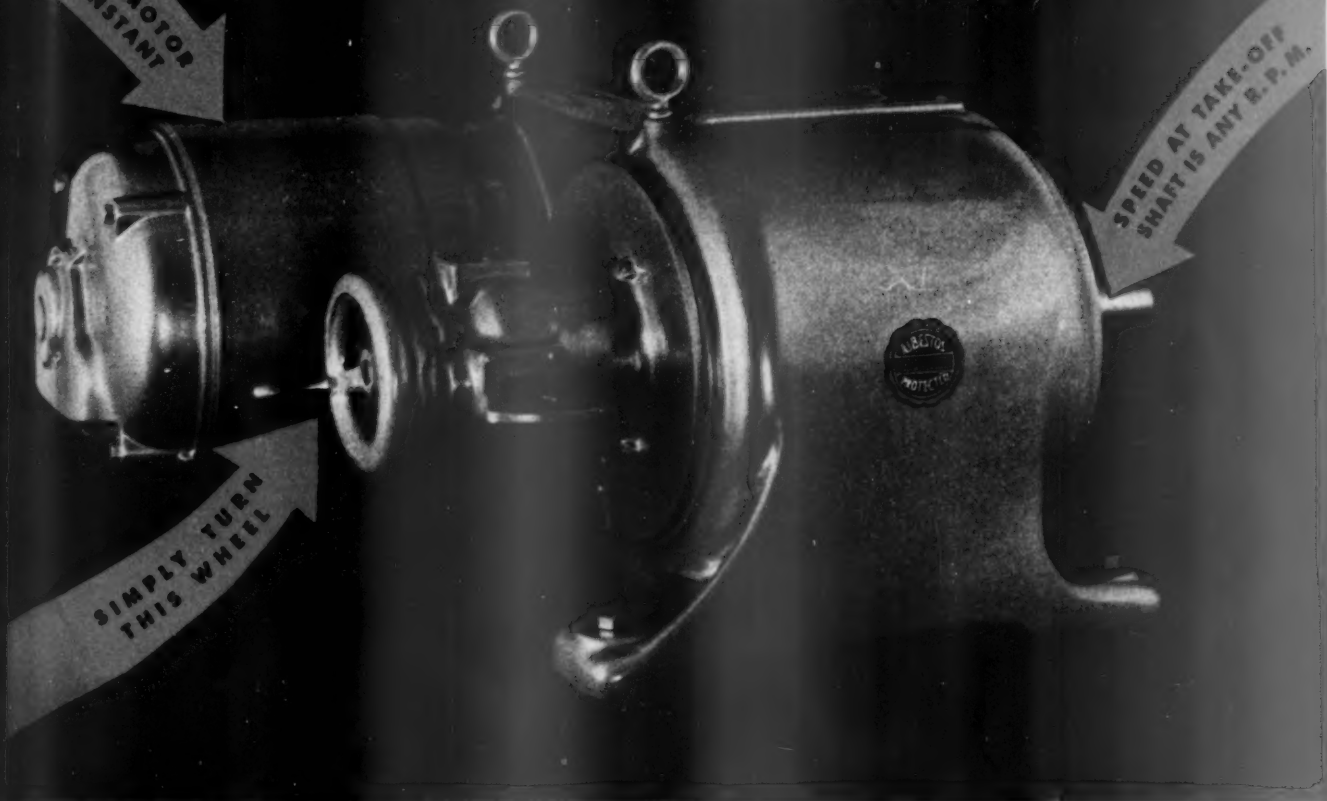
• **Tea Ceilings Set**—Specific maximum prices at which CCC may sell tea to the trade and ceilings at retail levels were established by OPA Mar. 12. Ceiling prices for CCC sales are about 7¢ to 12¢ per pound lower than those under the previous price schedule No. 91. As a result of the cut in bulk tea prices, ceilings for packaged tea and tea bags may be reduced.

Since only high grades of tea will be imported, housewives may find only slight price reductions. In many cases they will be obliged to buy better varieties than usual—in somewhat standardized packages. Effective Mar. 31, the Dept. of Agriculture has ordered a reduction in the variety and sizes of tea and tea ball containers.

• **Postwar Popularity Seen**—Britain is looking to a much bigger postwar tea market in the United States because of the strong emphasis on quality and the fact that American doughboys overseas are drinking much more tea than ever before.

America's most versatile motor

SIZES: 1/4 H.P. TO 25 H.P.



FROM SNAIL'S PACE TO LIGHTNING SPEED



ANY and all speeds over a wide range are offered by the U. S. Varidrive Motor. Speed changes can be made while the driven machine is in motion. It gives you power with thousands of speeds. Heretofore it was necessary to equip a machine with extra cone pulleys, belts or cumbersome gear-change mechanism. Now you can have an infinite speed change and built-in motor, all within a neat, compact housing which occupies

but slightly more space than an ordinary motor. The Varidrive embodies an electro-mechanical power conversion which changes the fixed, constant speed of the motor element to variable speeds at the take-off shaft without surge or fluctuation. Moreover, the Varidrive embodies the three exclusive features combined only in U. S. Motors,—Asbestos-protected windings, normalized castings and Lubriflush lubrication.

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FOR INFINITE, SELECTIVE SPEEDS FROM 1 R.P.M. TO 10,000 R.P.M.

Different types of Varidrives are available to meet the precise requirements of any machine in your plant. Types include Horizontal,

Upright and Vertical, with manual or remote control. Combination Varidrive-Syncro gear Types give multiplied power at any r.p.m.

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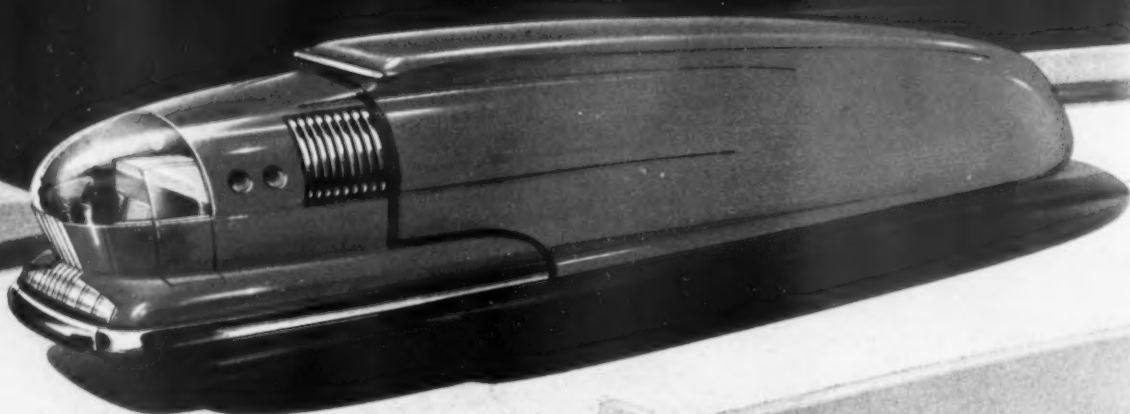
U.S. ELECTRICAL MOTORS

Inc.

ATLANTIC PLANT.....MILFORD, CONN.
PACIFIC PLANT.....LOS ANGELES, CALIF.
Midwest Assembly Plant.....Chicago, Ill.
Factory Branches: Boston, New York, Pittsburgh,
Philadelphia, San Francisco, Fresno and Seattle.
Distributors in all principal cities.

IF IT ISN'T A U. S. MOTOR, IT ISN'T A VARIDRIVE

Super-Transport on Super-Highways



Lurelle Guild, noted industrial designer, gives his conception of a truck of tomorrow (above). "The possibilities for progress in motor vehicle design have only begun to be explored," says Mr. Guild, whose designs have been incorporated in hundreds of nationally known products ranging from railroad trains to refrigerators.

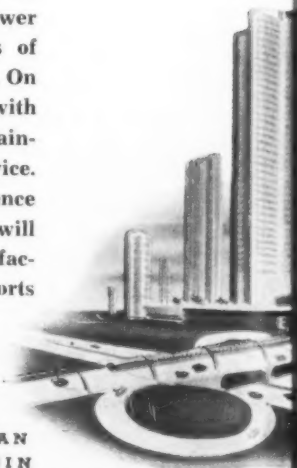
For a better world tomorrow, buy War Savings Bonds today.

America's formula for plenty is a simple one — production plus transportation! The first of these is already assured. The second is in the making. Tomorrow's vehicles will be a triumph of aerodynamic design and advanced engineering. New fuels, new power plants, better load distribution, better visibility for drivers, more comfort, improved safety, lower ton-mile costs — all are on the horizon right now. But regardless of the size, shape or design of the vehicles of tomorrow, axles must carry the load, move the load, stop the load.

Timken will be ready with both axles and brakes that will do the job better, at lower cost. Today, motorized military vehicles of every type roll to battle on Timken Axles. On the home front, Timken is co-operating with a sound, far-reaching program of Axle Maintenance for vehicles in commercial service. After the war, all this additional experience — all Timken's resources and facilities — will be available to those foresighted manufacturers who are planning the super-transporters for the super-highways of tomorrow.

TIMKEN AXLES

THE TIMKEN-DETROIT AXLE COMPANY, DETROIT, MICHIGAN
WISCONSIN AXLE DIVISION • OSHKOSH, WISCONSIN



WAR BUSINESS

CHECKLIST

A digest of new federal regulations affecting priorities, price control, and transportation.

Steel Plates

Standard specifications for carbon steel plates have been established by WPB, reducing the number of types that may be produced from several hundred to approximately 25. This elimination of nonessential specifications is expected to result in a substantial addition to the productive capacity of the industry, which produces nearly 20% of the nation's output of semifinished and finished steel products.

Glycerin

Order M-58, as amended, bans the use of glycerin after Apr. 1 in cigarettes, cosmetics, and all other products except munitions (page 85).

Passenger Transportation

All vehicles now engaged in carrying nine or more persons in local passenger transportation, including such diverse carriers as buses, trolley cars, and ferryboats, have been frozen in present service by the Office of Defense Transportation. Main reason for the freeze is to protect the transportation requirements of war workers and school children by preventing transfer of vehicles from communities where they are needed. (Order ODT 35.)

Tires

Starting Apr. 1, new tires will be available to eligible motorists with low mileage rations. At present, only those with mileage over 560 monthly can qualify (BW—Mar. 6'43, p. 56). When the new amendment goes into effect, drivers with a monthly mileage over 240 whose tires are worn beyond the recappable stage may be allotted new Grade II tires. The amendment also provides that Grade I tires will be available to drivers with rations over 560 miles, instead of the present 1,000. (Amendment 16 to Ration Order 1A.)

Tractors

Rubber Director William Jeffers has agreed to the release from inventory of enough wide tires to complete fabrication of between 13,000 and 14,000 farm tractors. All parts except for tires are now in the hands of manufacturers. Manufacture of new wide-base tires will not be required to complete this program, but between 3,000 and 4,000 small front wheel tires will have to be made. The action was taken in the attempt to release completed tractors in time for spring planting.

Wheat for Alcohol

Terms of the contract under which the Commodity Credit Corp. will sell wheat



*"Looks a bit crowded
in there, conductor!"*

"In addition to many thousands of civilians, we are carrying lots of soldiers and sailors on furlough and often entire train-loads of troops. Yet the Seaboard is doing its best to make all passengers as comfortable as possible."

"Okay, conductor! We folks who are not in the service are ready to put up with any inconvenience when we travel these days."

KEEP ON BUYING WAR BONDS AND STAMPS

Remember, there's no let-up, no time-out, for our fighting men

SEABOARD RAILWAY

**WORKS
FOR
VICTORY**





None in the concert audience knows that the regular oboe player has tonsillitis and another has taken his place. Nor do replacements of hard-to-get parts in Whiting Victory Cranes affect performance.

WHEN TIME COUNTS,
SPECIFY

WHITING Victory CRANES

Smooth-running. Quiet. Easy to handle and operate. These are qualities built into every Whiting Crane. Their stamina and durability have been proved for nearly sixty years.

BUT THIS IS WAR—and in war time things are different. Whiting Victory Cranes are different . . . in that they are engineered to make use of available parts and types of construction, so nothing may interfere with scheduled deliveries.

Each Victory Crane is guaranteed to perform its required task and give lasting satisfaction in accordance with long-established Whiting standards. Whiting Corporation, 15661 Lathrop Ave., Harvey, Ill.



BUILDERS OF QUALITY CRANES FOR NEARLY 60 YEARS

WHITING CORPORATION



QUIET PLEASE!

Handling explosives is at best a ticklish job but assembling hand grenades is just one shade this side of a nightmare. Girls at the Charleston Ordnance Depot listen attentively when they attach fuses to live pineapples. If the things start to sputter, they heave them behind a steel safety partition to explode.

to distillers of industrial alcohol for use in explosives during the second quarter of 1943 have just been announced. The prices will be on the same basis as the current quarter—9¢ per 60-lb. bushel less than the ceiling price of No. 2 yellow corn per 56-lb. bushel. CCC will also supply wheat to millers for processing into granular flour for use in alcohol distillation.

Osmium

Use of osmium, heaviest of the metals, has been prohibited except in the manufacture of alloys for electrical contacts. Stocks of osmium alloys now in the hands of consumers are not restricted by the order. (Order M-302.)

Meat

All livestock slaughterers operating under federal inspection are required to set aside specified percentages of their meat for purchase by war agencies. The amount of pork to be set aside is 45%, of lamb and mutton 35%, of veal 30%, of canner and cutter grades of beef 80%, and of all other grades of beef 40%. (Food Distribution Order 28.1.)

Canned Meat

Producers of canned meat who have been pressed for storage space due to the freeze on sales are now permitted to transfer to wholesalers up to 50% of their inventory on Feb. 17, plus 50% of all stocks produced or acquired since that date.

Potatoes

In order to combat the black market in potatoes, in which seed potatoes and potatoes mismarked as seed have been sold

PREVENTING "FREEZING" WHEN THINGS GET HOT



"AT THE HEIGHT OF A RAID OR AT A CRUCIAL MOMENT DURING A DOG-FIGHT"

For Operating Executives, Engineers and Purchasing Departments . . . A complete catalog of Unarco Insulations and Packings. When writing ask for Manual 48-969



For Engineers . . . A 72-page manual of Insulation methods—application on Boilers, Induced Draft Fans and Ducts, Turbines and Stop Valves, Flanges and Fittings; Marine Boilers, Pumps, Fans, Engines and Turbines, etc. Ask for Manual 48-969.



A frozen oil line during the height of a raid or at a crucial moment during a dog-fight could well prove fatal to aircraft and crew—that's why leading manufacturers of aircraft have spent so much time during the past few years in the development of lagging and insulation for oil lines. This lagging and insulation protects the vital parts of the engine and piping—keeps it from freezing at the -20° temperatures modern avia-

tion is having to become acclimated to.

Union Asbestos & Rubber Co. engineers worked with aviation engineers in the development of a new type insulation that would surpass all known methods in the provision of a highly efficient insulation that could take everything the airplane could give. Unarco Insutube (an asbestos sleeve insulation) was developed for just such a purpose . . .



TWO ARMY-NAVY "E" AWARDS FOR EXCELLENCE IN WAR PRODUCTION. ONE TO THE CICERO, ILLINOIS PLANT; ONE TO THE PATERSON, NEW JERSEY, PLANT.



Insulation For Marine, Railroad, Aviation and Industrial Use

UNION ASBESTOS & RUBBER COMPANY

Offices: CHICAGO, NEW YORK, SAN FRANCISCO • Plants: CICERO, ILL., BLUE ISLAND, ILL., PATERSON, N. J.

MAGIC NEW REMOVABLE STICKERS



Applied without moistening—won't come off unless intentionally removed—then peels off with ease.



SPEEDS PRODUCTION AT DOUGLAS AIRCRAFT
used as assembly-line instruction label placed directly on parts in production.



ACTS AS "ROUTE TAG" AT BRIGGS MFG. CO.
Placed on parts in production, this sticker is a route tag and inspection sticker.



SAVES MASKING TIME AT GENERAL ELECTRIC
Pre-cut stickers save hours over hand cutting in masking areas up to 8" wide.

Write for samples and
catalog BW-0

Kum-Kleen

REMOVABLE
STICKERS

AVERY ADHESIVES

451 E. 3rd St., Los Angeles, Calif.
In Canada: Enterprise Sales
and Distributors, Toronto



Allied Products Corp.
(Four plants)

Alloy Steel Gear & Pinion
Co.

Chicago, Ill.

American Aluminum Ware
Co.

Newark, N. J.

American Cyanamid & Chem-
ical Corp.

Maynard, Mass.

American Foundry Equipment
Co.

Mishawaka, Ind.

American Key Can Co.
Chicago, Ill.

American Laundry Machin-
ery Co.

Cincinnati, Ohio

Androscoggin Mills
Lewiston, Me.

Animal Trap Co. of America
Lititz, Pa.

Armour & Co.
Chicago, Ill.

Arnold Engineering Co.
Marengo, Ill.

Baldwin Locomotive Works
Eddystone, Pa.

Borg-Warner Corp.
Rockford, Ill.

The Columbian Vise & Mfg.
Co.
Cleveland, Ohio

Continental Mills
Philadelphia, Pa.

C. B. Cottrell & Sons Co.
Westerly, R. I.

The Couch-Uthe Co.
Elyria, Ohio

Drayton Mill

Spartanburg, S. C.

E. I. du Pont de Nemours
& Co., Inc.

Morgantown, W. Va.

Eclipse Lawn Mower Co.
Prophetstown, Ill.

The Fisher Co.
Charles City, Iowa

The Gent Machine Co.
South Euclid, Ohio

Golden State Co., Ltd.
Tulare, Calif.

Harrison Radiator Co.
Lockport, N. Y.

Hercules Powder Co.
(Two plants)

Holcomb & Hoke Mfg. Co.
Indianapolis, Ind.

The A. F. Holden Co.
(Two plants)

Hynson, Westcott & Dunning,
Inc.

Baltimore, Md.

Irwin Augur Bit Co.
Wilmington, Ohio

The Kelley-Koett Mfg. Co.
Covington, Ky.

Mason City Tent, Awning &
Canvas Co.

Mason City, Iowa

Ladish Drop Forge Co.
Cudahy, Wis.

Lalanc & Grosjean Mfg. Co.
Woodhaven, N. Y.

Lowell Wrench Co.
Worcester, Mass.

The Lufkin Rule Co.
Saginaw, Mich.

Midwest Piping & Supply Co.
St. Louis, Mo.

Morey Machinery Co., Inc.
Astoria, N. Y.

Norquist Products, Inc.
Jamestown, N. Y.

Ogden Arsenal
Ogden, Utah

Press Wireless, Inc.
Hicksville, N. Y.

Shure Brothers
Chicago, Ill.

The F. W. Sickles Co.
Chicopee, Mass.

The L. S. Starrett Co.
Athol, Mass.

Wilson Mechanical Instru-
ment Co.
New York, N. Y.

(Names of winners of the Army-Navy award for excellence in production announced prior to this new list will be found in previous issues of Business Week.)

for eating purposes without a price ceiling, OPA has set a maximum price for sales by country shippers at the level that prevailed between Feb. 15 and Mar. 1, 1943. In addition, sales of seed potatoes are prohibited unless sellers establish that they are to be used for planting purposes. (Regulation 271.)

Other Priority Actions

Controls over the distribution of repair parts for track-laying tractors are modified by Order L-53-b, as amended. . . . Limited output of unconcentrated citrus fruit juices, and certain other changes in regulations regarding these juices, are provided in Amendment 3 to Food Distribution Order 3. . . . Amendment 17 to OPA Restriction Order 1 permits slaughterers in Washington, Oregon, California, and Nevada to charge early spring lamb and mutton deliveries against unfilled civilian beef, pork, and veal quotas. . . . Permitted uses of glassine, greaseproof, and vegetable parchment paper are specified, and all other uses are banned, by Order M-286. . . .

Amendment 4 to Ration Order 17 permits dealers whose stocks of shoes have been unavoidably damaged by fire, water, steam, etc., and thus rendered unsaleable in competition with undamaged shoes, to apply to their local rationing boards for permission to mark these shoes "nonrationed."

Other Price Actions

Ceiling prices on brooms made of broom corn are increased 10% by Order 216 under Regulation 188. . . . Manufacturers of items of underwear from which rayon striping has been eliminated in compliance with WPB Order L-247, and in which no other changes have been made, do not have to lower their ceiling prices under the terms of Regulation 221, as amended. . . . Manufacturers and wholesalers of automotive batteries are provided with an alternative method of computing ceilings by Amendment 70 to Regulation 136. . . . The maximum price for the sale of new vacuum cleaners to a government agency is set at a lower level than that for sales to consumers by Amendment 7 to Regulation 111.



WHO DID IT?

CHALK IT UP to the enemy. Kid yourself if you want to. But the fact remains that, in every casualty list there are names that would never be there but for us. Men who would still be walking, talking, taking a full breath of life... if we had supplied them with the implements of war to fight with... and supplied them *enough on time*.

That is why every hour of production time we lose, whether from absentee-ism or from slow downs, ceases to be a matter of bookkeeping, a payroll record, a plus-or-minus on our weekly pay check. Every hour may be the life, or blood of the extra man on the casualty list.

That is why Jenkins Bros. preaches ceaselessly against interruptions to production. That is why, in our own

sphere, we preach against plant slow downs where those slow downs can be avoided.

The proper care and maintenance of valves can avoid slow downs, wherever a slow down may be occasioned by the interruption to fluid control in a plant. The way to avoid trouble due to valve failure — in even the best of valves — is to *avoid it before it starts*.

Make sure the proper valve is

chosen for the installation. Make sure that the maintenance of valves is entrusted to experienced hands. Make sure that *new* workers are trained to operate valves properly.

Jenkins Engineers are ready to assist any management in developing a practical program of valve conservation. Reprints of this advertisement are available for use in morale-building work.

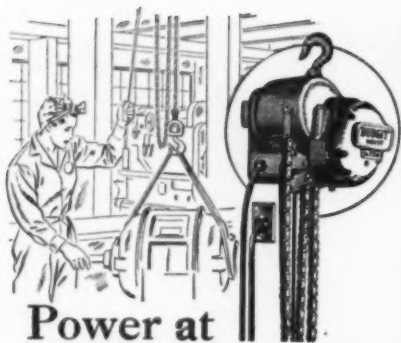
Jenkins Bros., 80 White St., New York; Bridgeport; Atlanta; Boston; Philadelphia; Chicago; Jenkins Bros., Ltd., Montreal; London.



JENKINS VALVES

SINCE 1864

For every industrial, engineering, marine and power plant service... in Bronze, Iron, Cast Steel and Corrosion-Resisting Alloys... 125 to 600 lbs. pressure.



Power at her finger-tips

AT the touch of her fingers, an electric 'Budgit' Hoist gives her all the strength she needs to do a man's job efficiently. To inspect parts that weigh 100 lbs. or more she must lift them from a truck to a table. In many war industries, there are thousands of places where women with 'Budgit' hoists can replace men and produce as much or more. This helps war effort and war economy, too.

'Budgit' Hoists are portable, electric hoists with lifting capacities of 250, 500, 1000 and 2000 lbs. They are priced from \$119 up. Hang up, plug in, and use. For complete information, write for Bulletin 348.



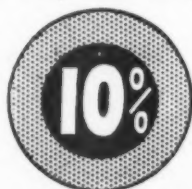
'BUDGIT' Hoists

MANNING, MAXWELL & MOORE, INC.
MUSKEGON, MICHIGAN

Builders of 'Show-Box' Cranes, 'Budgit' and 'Load Lifter' Hoists and other lifting specialties. Makers of Ascroft Gauges, Hancock Valves, Consolidated Safety and Relief Valves and 'American' Industrial Instruments.



Be 100% with your



Buy **WAR BONDS**

PRODUCTION

Food for Industry

Many fats and oils are classified as edible by OPA, even though seldom eaten, so manufacturers are rationed.

OPA's rationing of edible fats and oils, effective Mar. 29, complicates the already complex problem of distributing one of the country's most important groups of industrial raw materials. The rationing regulations blanket distribution, from refiner on down, of all fats and oils that have any conceivable edible use.

• **Is Linseed Oil a Food?**—For example, OPA has control of refined and deodorized linseed oil—a commodity that has been used only for industrial purposes in the U. S. but is being used for edible purposes in Europe (BW—Feb. 20 '43, p48).

The rationing regulations also give OPA control over all meat fats from the slaughterer on down. Manufacturers who use meat fats or other fats and oils as raw materials in end products which are rationed—margarine or shortening, for example—come completely within OPA's control. They sell their end product for points and use the points to buy raw materials from the slaughterer or refiner.

• **Other Industries Hit**—Manufacturers who use rationed fats and oils to process nonrationed foods—shortening for bread or salad oils for mayonnaise are typical—must register with OPA local boards to get point allotments with which to buy their rationed raw materials. These manufacturers, including also makers of pharmaceuticals for internal use, are known in OPA rationing parlance as industrial users.

This leaves one other class of manufacturer who uses rationed meat fats or fats and oils for the manufacture of non-edible industrial products such as soaps. He is known as an industrial consumer, and he must go to the Fats and Oils Branch of the Dept. of Agriculture Food Distribution Administration for point allotments with which to buy any of the raw materials that come within the OPA rationing system.

• **Two-Way Control**—This has the net effect of imposing dual control over the consumer of fats and oils for industrial purposes. To the extent that he uses fats having an edible purpose, he is part of OPA's rationing system; to the extent that he consumes fats having no edible purpose, the industrial consumer is under Agriculture's direct control. The only place where the controls come together is the Food Distribution Admin-

istration's right to grant industrial consumers point allotments with which to buy OPA-controlled raw materials.

The old WPB order M-71, foundation of all fats-and-oils control, is being revised to eliminate the quotas on the flow of fats and oils into edible products. Quotas are expected to remain on the manufacture of medicinal products, such as soaps and protective coatings. In addition to this complete control, Agriculture has carried over a number of WPB orders dealing with uses of rare imported fats and oils—palm oil, sperm oil, and high lauric acid content oils.

• **Controls on Vegetable Oils**—Agriculture also has issued its own order giving the Food Distribution Administration basic control over allocations to refiners of four major vegetable oils—cottonseed, peanut, soybean, and corn oils. Although primarily used for edible purposes, these oils, particularly peanut and soybean, have numerous industrial uses.

Next to food uses of fats and oils, soaps and protective coatings account for the largest disappearance of stocks. In the wartime economy, food uses take precedence over all other uses, except perhaps the small amounts of rare oils which play a part in complicated industrial processes, such as machine tool work. It is clear that the rationing sys-



With the government's grip on fats and oils tightening, soap manufacturers must turn still more to substitutes to extend available stocks. Hercules Powder's chemists (above) claim to have the answer with a specially processed rosin which is being used increasingly even in toilet soaps. It makes for better solubility, and as much as 4% can be used without changing the color of white soap; 10% does not change performance.



**We're trying to do a
"Guadalcanal Day's Work"
—every day!**

The WEBSTER-BRINKLEY plant is out to
"bust the bottle-neck of TIME."

We know we're at WAR—and we're mad about it.

The boys in the fever-hot swamps of Guadalcanal or the snow-swept Aleutians are not watching clocks. Neither are our workers who are pledged to keep fit—to avoid time-losing accidents—and to be on the job every day possible.

Every Webster-Brinkley swing of the hammer is a blow at the AXIS and for our own boys—and it is in this spirit we are working. We have broken some production records and we are out to break some more.

If you've a war job along our line—Steam, Electro-mechanical, or Electro-hydraulic Steering Gears, or Deck Machinery for Navy, Maritime Commission, or Army Ships—we can help you get it done quicker.

Or—if you are thinking now about after-war production—keep us in mind.

GEORGE GUNN, Jr.
President

THOMAS J. BANNAN
Vice-President



*Manufacturers and
Designers of
STEERING GEAR
and DECK
MACHINERY*

WEBSTER-BRINKLEY CO.

SEATTLE · WASHINGTON



MORE WORK *from* WHAT YOU HAVE

War plants operating fork trucks and tractors are getting more work out of both by using them in combination. The fork truck is best for handling and tiering pallet loads. The tractor is best for hauling the loads on long trips because it can *pull* more of them on trailers than a truck can *carry*. All that's needed to avoid manual handling is a fork truck to load and unload the trailers.

Some plants operating fork trucks but no tractors get almost as good results by equipping the fork trucks with couplers, so that, in addition to handling and tiering, they can pinch hit as tractors. Either method helps to get more work out of the trucks already on hand.

For other ideas, send for the Association's Material-Handling Handbook. Free to anyone engaged in the production and distribution of war goods. Cost record book also available.

208 SO. LA SALLE ST.
CHICAGO, ILLINOIS



THE INDUSTRIAL TRUCK STATISTICAL ASSOCIATION

MEMBERS—TRUCK MANUFACTURERS: AUTOMATIC, BAKER, CRESCENT, EASTON, ELWELL-PARKER, MERCURY AND YALE;
BATTERIES: EDISON, EXIDE AND PHILCO; BATTERY CHARGING EQUIPMENT: ELECTRIC PRODUCTS AND HERITIER.



I like to travel, too

If you are getting ready to swap your address for a new one, be sure Business Week (that's me) comes along.

I start out from Albany, N. Y., every week and I can trail you to your new spot just as easy as I've been making the old one. And I'll like it, too.

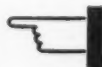
All you have to do is give me orders . . . like this:

Circulation Dept., Business Week, 330 W. 42nd St., New York City

Please change my address: NAME.....

OLD ADDRESS.....

NEW ADDRESS.....



tem will be operated to see that edible uses are taken care of first, but it is too early to say what will happen to the so-called industrial consumers, particularly soap makers.

• **Tight Policy Expected**—It is believed that OPA and the Food Distribution Administration, in the beginning at least, will try to provide soap makers and other industrial users with enough fats and oils to produce up to their M-1 quotas. Whether very large amounts of edible fats and oils can be contributed to this purpose cannot be estimated until the OPA rationing system has been in operation for several months. At first, the government agencies probably will be tight with use of edible raw materials for nonedible purposes.

This means that soap makers and other industrial users will have to lean more than ever on fats and oils having no edible purposes, and on so-called extenders which make existing stocks go further than ever before. This is the reason soap makers are putting new steam into the national advertising campaign behind the fat salvage program.

• **Pine Products for Soap**—This is also the reason for the interest in Hercules Powder's recently developed process for the use of rosin in soaps—a process that its sponsors claim not only is a substitute for tight war materials but also results in better soap. Rosin is made from plentiful Southern pine. Agriculture also is interested in the use of tall oil—a byproduct of the wood pulp industry—as an extender for fats and oils.

Soap companies already are operating on a 16% reduction under the 1940-41 production averages. At present rates, there will be enough soap to take care of U. S. needs—although pressure for selling that "extra cake" might have to be dropped. Further reductions, however, might result in a shortage that would ultimately lead to rationing.

• **Fat Salvage Totals**—The trouble with the fat salvage campaign is that housewives and butchers are expected to be more careful with what they put into salvage now that all fats and oils are being rationed. Present collections from housewives and butchers total over 6,000,000 pounds a month. Soap makers hope to get another 10,000,000 pounds, and the Army and Navy contribute 6,000,000 pounds.

Soap makers, who have been living for the past year off their inventories of imported fats and oils, would like to get some ship space to replenish their supplies, but this picture is not bright. As another means of increasing raw material supplies, large quantities of tallow are now being used, but there isn't enough of this product to make up the gap in the total soap picture.

• **Soap, Glycerin, and War**—From the standpoint of war production, glycerin, which is itself a byproduct of soap production, is still the key to the 1943 soap



Autocar's job is still DELIVERY!

In a double sense, Autocar's task is still delivery...delivery of the smashing blows that win battles...delivery from the worst a powerful enemy can dish out. It is doing both these jobs simultaneously and well on the world's fighting-fronts—for our Army, our Navy, our Marines and our Air Forces.

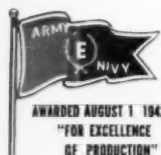
When all this is over and done with, Autocar will again deliver heavy-duty, money-making, money-saving performance for private enterprise. It will perform these

peace-time jobs better than ever, for Autocar in uniform is training to be stronger, more agile, more dependable. Factory-equipped Autocar branches will help you keep your pledge to the U. S. Truck Conservation Corps.

AUTOCAR

MANUFACTURED IN ARDMORE, PA

SERVICED BY FACTORY BRANCHES FROM COAST TO COAST





TYGON STOPS THE GNAWING OF THE MOUSE!

THERE is nothing dramatic about corrosion. No more dramatic than the gnawing of a mouse who inches his destructive way through the slow hours of the night.

And yet... in one industry alone, conservative estimates place the annual cost of corrosion in excess of one billion dollars! Enough money to build more than 10,000 merchant ships, more than 4,000 giant bombers!

Corrosion is by far the largest single factor in America's gigantic bill for maintenance and repair — both industrially and domestically.

Yet up to a few years ago most industry was compelled to accept corrosion as something inevitable — part and parcel of the cost of doing business.

Then came Tygon, a synthetic material so basically inert that it resisted the attack of more than 90% of the known corrosive agents. Air, sunlight, moisture, and time — the oxidizing elements that tend to level all material things — have little effect on Tygon. The chemicals that quickly destroy steel, that age rubber overnight, that soften and disintegrate wood, can be handled safely in Tygon protected equipment.

Tygon is extremely flexible in application. It possesses the unique virtue of retaining its basic corrosion-

resistant properties through a wide range of physical forms. As a liquid, Tygon is used as a paint to protect all types of surfaces against corrosive fumes and condensates, or as a means of impregnating porous materials to make them acid and moisture resistant as well as flame retardant. As a sheet material Tygon is used as a lining for tanks or vessels in which corrosives are made and handled; or for gasketing or sealing purposes, retaining its flexibility at temperatures 80° below zero and even lower. Tygon flexible tubing replaces rubber for hundreds of industrial uses. Tygon formulations for molding extend the virtues of this amazing material to a wide range of mechanical goods which must withstand all types of corrosive conditions.

Would you like to learn more about this versatile material? Write today for Bulletin 1621-A.



U. S. STONEWARE

AKRON, OHIO

IN CANADA: CHAMBERLAIN ENGINEERING, LTD., MONTREAL

ENGINEERS • MANUFACTURERS • ERECTORS OF CORROSION-RESISTANT EQUIPMENT

economy. With civilian uses of glycerin virtually eliminated (page 85), military needs could eventually determine how much byproduct glycerin is needed and, hence, how much soap may be produced.

While the fate of soap production is being decided on the raw materials front, OPA has prepared specific dollar-and-cents ceilings by brand and region for all the leading makes of soap. In addition, Price Administrator Prentiss M. Brown has promised the industry that rationing, if it ever becomes necessary, will be worked out on a basis that will protect brands.

Glycerin Is Out

Use in cosmetics and in cigarettes banned. Margarine is only food to get any as war demands expand.

Starting in April, there will be no more glycerin for use in foods (except margarine), tobacco products, cosmetics, dentifrices, lotions, shaving creams, shampoos, hair tonics, and soaps.

• **Long on Priorities**—Controls aren't new in glycerin, but these are the tightest to date.

Because of its use in the manufacture of munitions and its dependence on the precarious fats-and-oils supply, glycerin was one of the first raw materials to be placed under complete government control.

Its use was first controlled by OPM and then WPB's Chemicals Division. However, basic control over glycerin allocations was transferred from WPB to the Agriculture Dept.'s Food Distribution Administration along with control over fats and oils (page 80). Under the existing glycerin order (M-58), all civilian uses, except in minor amounts, have been subject to specific monthly allocations which are worked out jointly by WPB's Chemicals Division and Agriculture's FDA.

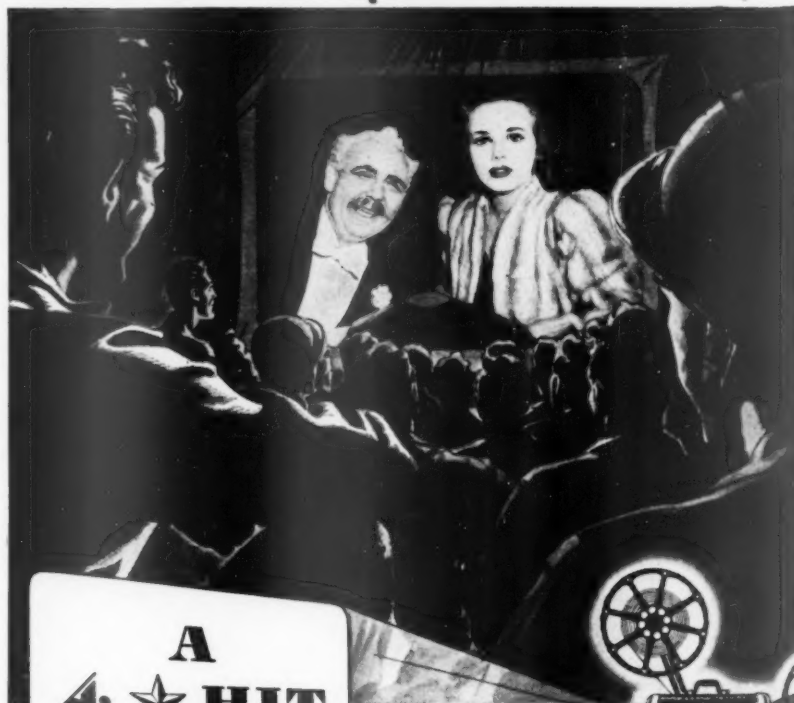
• **Eligible Users**—For the last several months, cosmetics, shaving creams, hand and face lotions have been getting 25% of their base-period use of this ingredient. For months, shampoos, hair tonics, and soaps have been entirely without allocations. Through February, allocations of glycerin for use directly in margarine, shortenings, and other edible products, such as pastry fillings, were granted up to 35% of base-period use. (Glycerin is used in these products only in small quantities for its emulsifying qualities.)

In order to safeguard the production of margarine—and it is being protected all along the line to stretch butter—glycerin has been granted in full for the manufacture of specialized proprietary emulsifiers in which it forms only one of

BUY WAR BONDS



AND STAMPS



A
★ HIT
in the
SOLOMONS

On the screen, *It Started with Eve*
A Universal Production

Look at them and be proud of them! As tough a bunch of hard-fighting marines and soldiers as ever outslugged the Japs. But now in a moment of leisure in a jungle setting, a screen goes up and a Bell & Howell Filmosound gives them the latest smash hit from Hollywood. Tired bodies are refreshed, taut nerves are relaxed, and they go back to their job of fighting—*fit to fight*.

To bring the movies of the homeland to its fighting men all over the globe is but part of the Bell & Howell war effort. For the home front there are Filmosound Projectors and the Filmosound Rental or Purchase Library of over 3,000 subjects.

Filmo cameras and projectors are also helping to train our armed forces. From the movies made and projected with this equipment they learn about the weapons, tactics, and strategies of war.

Some of the Most Timely Filmosound Library Subjects
Emergency First Aid ... Gardens for Victory ... Caucasian Barrier ... Milestones of Democracy ... Winning Your Wings (with Jimmy Stewart)—and hundreds of others. Write for details.

Bell & Howell Company, Chicago; New York; Hollywood; Washington, D. C.; London. Established 1907.

MOTION PICTURE CAMERAS AND PROJECTORS

PRECISION-MADE BY

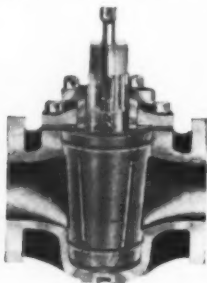
Bell and Howell





**NORDSTROM VALVES
ARE LUBRICATED
--vitally necessary for
control of war-plant lines**

IN making synthetic rubber, high octane aviation gasoline, magnesium and other vital war products, Nordstrom Valves are right in the center of production. Being lubricated, they do not stick. Embodying pressure lubrication, they do not leak. Fortified with Merchrome Coating when used on lines where extreme corrosion, erosion or high temperatures prevail, they do not gall. Their simplicity and ease of operation save man-hours.



Nordstrom Valves embody "Sealdport" lubrication. Positive pressure is transmitted by the lubricant through grooves in the plug and body by merely turning the top lubricant screw. The plug is constantly seated on a film of lubricant.

Sizes 1/2" to 30". For all temperatures.

Pressures from vacuum to 15,000 lbs. test.

Wrench or gear operated.

BULLETINS UPON REQUEST

MERCO NORDSTROM VALVE CO.

A Subsidiary of Pittsburgh Equitable Meter Co.

Main Offices—Pittsburgh, Penna.

Branches in all principal cities.

**NORDSTROM
LUBRICATED PLUG
VALVES
KEEP UPKEEP DOWN**

the ingredients. Glycerin also is used in making soft drinks, candy, chewing gum, food colors and flavors, but these uses got no allocations in March and will get none in April.

• **Treatment of Medicines**—In the manufacture of drugs and pharmaceuticals, glycerin is used as a carrying agent for elixirs, in the manufacture of capsules for vitamins, and for a number of other uses. Allocations of glycerin for use in making gelatin capsules, prescription pharmaceuticals, and basic drug chemicals have totaled 100% of the amounts requested, but allocations for the manufacture of other miscellaneous drugs and pharmaceuticals—primarily self-medication proprietaries—have totaled only 70% of base-period use. In March this was cut to 60%.

The various glycols are considered substitutes for glycerin, but only one—propylene glycol—is acceptable to the Food & Drug Administration as a substitute for internal use. Ethylene glycol and diethylene glycol are red flags to Food & Drug—particularly the latter which was the mixing agent in the elixir of sulfanilamide disaster that led to enactment of the Food, Drug, and Cosmetic Act of 1938. Reluctantly, Food &

Drug men admit they can take no action when ethylene or diethylene glycol is used in the neighborhood of 5% of total content in externally applied cosmetics.

• **Cigarettes Affected**—To preserve moisture in cigarettes, tobacco processors are also eyeing diethylene glycol—already in use in some brands. Apple juice is also under consideration as a substitute for glycerin (BW—Feb. 27 '43, p. 86), but the scarcity of these substitutes is likely to mean that smokers will find their cigarettes a good deal drier.

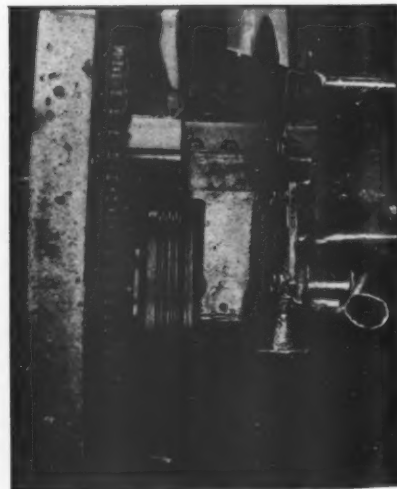
In February, drug requests for propylene glycol were filled almost completely, but cosmetic requests were cut to 29%. Requests for propylene glycol for food and flavoring uses were granted up to 80% in the same month. In March, increased pressure on propylene glycol as a result of glycerin cuts forced further reductions in the amounts made available for food, flavoring, and cosmetic use.

• **More Cuts to Come**—Still further cuts are anticipated for these uses in the April allocations. All civilian uses of ethylene glycol were filled in March, but cosmetic use of diethylene glycol was put on a quota system.



WHEEL WOES

The big play that wooden wheels got when the brakes were applied to rubber tires is petering out. Early enthusiasts find themselves too busy with war work, and there isn't any steel for rims. Offering at best only moderate wear at slow speeds (in the neighborhood of 10 m.p.h.), the timber tires have presented manifold problems. Thus, when the Chicago Herald-American put steel-rimmed wheels on 15 trucks, it had to install auxiliary sprocket-driven axles to insure low speeds. Now it has replaced steel rims with old, solid rubber tires.



AN OPEN LETTER TO

*** Paul V. McNutt:

LAMSON CORPORATION

PNEUMATIC DISPATCH TUBES-MECHANICAL CONVEYORS OF ALL KINDS

SYRACUSE, NEW YORK

March 1, 1943

The Hon. Paul V. McNutt, Chairman
War Manpower Commission
Washington, D.C.

My dear Mr. McNutt:

Manpower Waste in Handling Materials

The President's "Manpower" order of February 9th emphasizes the vital necessity of greater production -- not only more goods per worker due to longer hours but also more goods produced during each one of those hours. Yet one proven source of increased production remains largely unrecognized and untapped.

It is not generally known or realized that Materials Handling Operations consume at least 30% of the total time required to produce manufactured articles. This covers the movement of materials through the manufacturing, storage, and shipping stages. The manpower savings, when manufacturing plants properly apply materials handling equipment, are indeed prodigious, resulting in an amazingly rapid amortization.

We, of the materials handling industry, have countless case histories proving the effectiveness of conveyors and other types of materials handling equipment in increasing production per man hour. Typical of war-production speed-ups are the following - taken at random from our files:

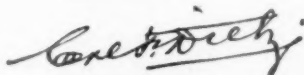
1. Shell-fuze production increased 2½ times.
2. Aircraft accessories production quadrupled with but 25% increase in personnel.
3. Approximately 300,000 man hours of messenger service saved annually in a large bomber plant.

Despite examples like these, which our industry as a whole can multiply a thousand-fold, not one industrial plant in ten employs an engineer whose sole duty it is to find ways and means of reducing this 30% production time loss with its consequent wasted man hours.

Strangely enough, few plants invite a general survey by a qualified materials handling engineer to help eliminate such waste. Furthermore, so far as we have been able to determine, not one technical school in the country includes in its curriculum a course in materials handling as a major subject.

We are bringing this situation to your direct attention so that it may be recognized as one of the very important factors in planning effective manpower use.

Very truly yours,



Carl F. Dietz
President

CFD
emk

LAMSON CORPORATION • SYRACUSE, N. Y.

PROPERLY DESIGNED DROP FORGINGS



Airplane propeller hub being forged on Chambersburg Steam Drop Hammer

THE solution of the increased load thrown on the forging industry lies not only in the use of modern equipment... such as Chambersburg Hammers... but also in properly designed forgings... which mean less metal... and less machining. Less metal for each forging, less machining necessary to finish, fewer man-hours per piece and less horsepower mean savings of vital importance NOW.

CHAMBERSBURG ENGINEERING CO. • CHAMBERSBURG, PA.

THE CECOSTAMP • A NEW METHOD OF PRODUCING AIRPLANE STAMPS

A new, high-production, easily controlled, impact-type drop stamp, designed by Chambersburg Engineers, that is a close match of aircraft manufacturing requirements. In the rapid production of drop stamps from stainless steel, high strength aluminum alloys and other metals of low ductility, the CECOSTAMP has taken its place with the newest tools and techniques made necessary by the gun industry.

CHAMBERSBURG
HAMMERS • CECOSTAMPS • PRESSES



A Case of LESS SCRAP, MORE FIGHT

Two sleek and polished examples of superior machining in a propeller shaft for a Buick-built Pratt & Whitney aircraft engine.

It used to be cut by slow and painful whittling from a forging made from a 150-pound bar of steel.

By changing the forging method, Buick found a way to get the same results from a steel bar weighing only 110 pounds.

Nineteen pounds less material to be cut away, 19 pounds less scrap to be sent back for reworking, considerably

less expenditure of precious machine tools and—!!! propeller shafts from the same material that used to deliver only 100-to 150 times per shaft!

The country needs scrap metal—all you can dig up.

It also needs to avoid waste of materials in the making of fighting tools.

So we'll strike a bargain with you.

Do your share in "getting in the scrap"—and we'll do ours in this and other instances like it, to get the "right" out of the materials we work with.



WHEN BETTER AUTOMOBILES ARE BUILT
BUICK WILL BUILD THEM

BUICK DIVISION OF GENERAL MOTORS

CHAMBERSBURG

HAMMERS • CECOSTAMPS • PRESSES

Chambersburg Engineering Co.

Chambersburg, Pa.

NEW PRODUCTS

Water-Repellent

Exposure to the vapors of any one of several chemicals (one class being known as methyl chlor silanes) is a quick new method of rendering cloth, paper, ceramics, etc., water-repellent. The "invisible raincoat," thus developed in the research laboratories of General



Electric Co., Schenectady, N. Y., is so extremely thin that its structure cannot be determined by chemical analysis. Yet it prevents water from spreading to form a continuous film.

If moisture does collect, as on the treated filter paper in the right hand of the researcher, it forms into isolated drops. It does not sink into the underlying material as in the untreated filter paper in the researcher's left hand. Just how far the method can be commercialized at present is a question, because one of its important applications is the treatment of ceramic insulators in military radio equipment. Previous practice was to coat them with wax, but the chemical method is several times as effective and much more permanent.

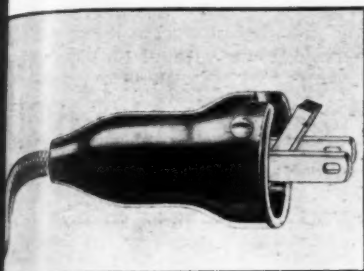
Spraying Wax

Many of the man-hours normally consumed by fleet operators in waxing the bodies of trucks, buses, or cars to protect and preserve their finishes can be conserved with Transportation Maintenance Wax. It is a new type of liquid wax finish, formulated by S. C. Johnson & Son, Inc., Racine, Wis. It is applied quickly with a compressed-air spray gun and dries to a bright finish—without rubbing.

Circuit Breaker Plug

Double duty is built into the new Hopax Circuit Breaker Plug, manufactured by Hopax Industries, Inc., 1 N.

Salle St., Chicago. It replaces a conventional receptacle plug on the connecting cord of practically any small electric power tool, office machine, home appliance, heating device, fluorescent light, etc. In the event of overload, short circuit, motor stall, or accidental ground in a particular device or cord



to which it is connected, a small lever between its prongs flips and breaks the circuit.

In this manner, protection can be provided not only to each individual piece of equipment on a circuit, but also to the circuit itself. In other words, faulty operation of one device need not affect others on the same line. The circuit breaker is actuated by heat, thus providing a time delay that prevents needless interruptions caused by sudden power surges. To reset it after a circuit break, simply raise and lower the lever back into place.

"Stretcher-Kot"

Bent ash replaces critical steel tubing in the Lightweight Stretcher-Kot, new product now being marketed by J. L. Schilling Sales Co., 16 E. 40th St., New York, to plants, stores, and emergency first aid centers; weight is reduced to less than 12 lb. Storage against emer-



gencies is facilitated by the fact that one stretcher will nest into another.

Support for a patient is provided by a length of stout cotton duck which is laced to the frame with braided cotton rope and can be removed for laundering and sterilizing. In the event that an ambulance is not available, the tapering design of the stretcher is such that two of them will fit easily into the rear of a station wagon.

Now O. B. A. speeds threads through

"finishing school"



THEY'RE getting better ordnance faster today because so many tedious thread-cleaning jobs have been shouldered by Osborn power-driven Brushing Wheels. Here's an example:

At a midwestern plant doing close-tolerance ordnance work, Osborn Brushing Specialists were conducting an O. B. A. (Osborn Brushing Analysis) to determine exactly where and how brushing could improve quality and step up production. They found a frantic search going on for a method of removing burrs and metallic fuzz from a threaded part so that it would "spin-down" on the inspectors' ring gauges, and still hold tolerances as required. To get clean, smooth, free-running threads the shop had tried every practical cleaning method they

knew of, but without success.

The Osborn men suggested a standard Monitor Section Brushing Wheel with fine, crimped wire. Tests were run off immediately. Not only did the brushed part pass the "spin-down" test, but the operator found he could finish half a dozen pieces in the time it took to finish one by the fastest previous method.

Osborn maintains Brushing Specialists in every section of the country to aid in solving burring, cleaning and finishing problems for war plants. For details of the O. B. A. (Osborn Brushing Analysis) or help on specific operations, get in touch with the Osborn representative in your district. *The Osborn Manufacturing Company, 5401 Hamilton Ave., Cleveland, Ohio.*



WORLD'S LARGEST MANUFACTURER OF BRUSHES FOR INDUSTRY

AMERICA'S VICTORY IS A MATHEMATICAL CERTAINTY!



MARCHANT

IS HELPING
IN TWO WAYS...

FIRSTLY
...in the production of
vital war matériel;

SECONDLY
...in the silent-speed and
accuracy of the thousands
of Marchant calculators
now serving the Armed
Forces, the Government,
and first-line industries.

SERVING IN SILENCE

MARCHANT

Silent Speed CALCULATORS

MARCHANT CALCULATING MACHINE COMPANY
• Home Office: Oakland, California, U.S.A.
Sales Agencies and Manufacturer's Service Stations
in All Principal Cities Give Service Everywhere

Better Bearings

Railroads conserve large stocks of bronze and babbitt by using lighter journal bearings; further savings possible.

The Assn. of American Railroads and some of its members are experimenting with a new type of car journal bearing which requires only about 20% of the critical metals used in the prewar bearing. The railroads are not hurrying their tests, however, because they are in the almost incredible wartime situation of having more bearing bronze and babbitt than they absolutely need.

• **Special Alloys Used**—Railroads wound up 1942 with a 14,000,000-lb. surplus of bearing metals, and the excess was increasing every week. The analysis of railway journal-bearing alloys differs from that required in any other major quantity, hence smelters' offers to buy the stockpile do not tempt the roads.

The prewar standard journal bearing weighed 25 lb., all of it bronze except a $\frac{1}{4}$ -in. babbitt lining. When WPB's predecessors clamped down on supplies of virgin copper, tin, and lead for this purpose, the association quickly approved a redesigned, 20 $\frac{1}{2}$ -lb., emergency bearing which was then fresh from successful experiments.

• **Two Metals Saved**—That bearing is somewhat narrower than the old style, is cast with a depression across the back which not only reduces the quantity of bronze required but also distributes wear across a broader bearing surface. The babbitt lining of the emergency model is only $\frac{3}{16}$ in. maximum thickness—a saving of $\frac{1}{16}$ in. Association engineers consider the new bearing better than the prewar model.

Babbitt and bronze economies resulting from widespread conversion to the emergency bearing accumulated the impressive stockpile. When a carload of worn 25-lb. bearings is recast into the new type, almost five new ones are produced from four old models.

• **Two Newer Models**—But an even newer and more economical type of bearing is now under practical test. There are two models—one patented by the Magnus Metal Co., Chicago, the other by the Railway Service & Supply Corp., Indianapolis. They are alike in many respects.

Instead of a full-bronze bearing shell, the new type consists of two pieces. The back is a ferrous casting; the liner is a bronze shell with babbitt lining, which weighs only six or eight pounds. Some of these, in service on locomotive tenders for nearly 100,000 mi., are mechanically satisfactory thus far.

• **The Patent Obstacle**—Whether the new bearing will get the association's

approval and be made eligible for use on cars that are sent off the owner line depends. If Washington keeps pressing for further copper and tin savings, the adoption seems probable. But two principal obstacles stand in the way: Salvage value of the new type is only about 20% that of the old bearings, although the original cost is much the same; the association is frankly reluctant to employ any patented product if it can get comparable results without royalty costs.

Midwest Council

Third aircraft trade body formed in central U. S., and fourth is under way in Texas-Mississippi area.

Aircraft manufacturers in the East and far West have their respective councils to arrive at mutual solutions of problems (BW—Mar. 20'43, p. 22), but the middle of the country, with its great bulk of aircraft suppliers, has had no trade group. Development of one was to be expected, and organization of the Central Aircraft Council was announced this week.

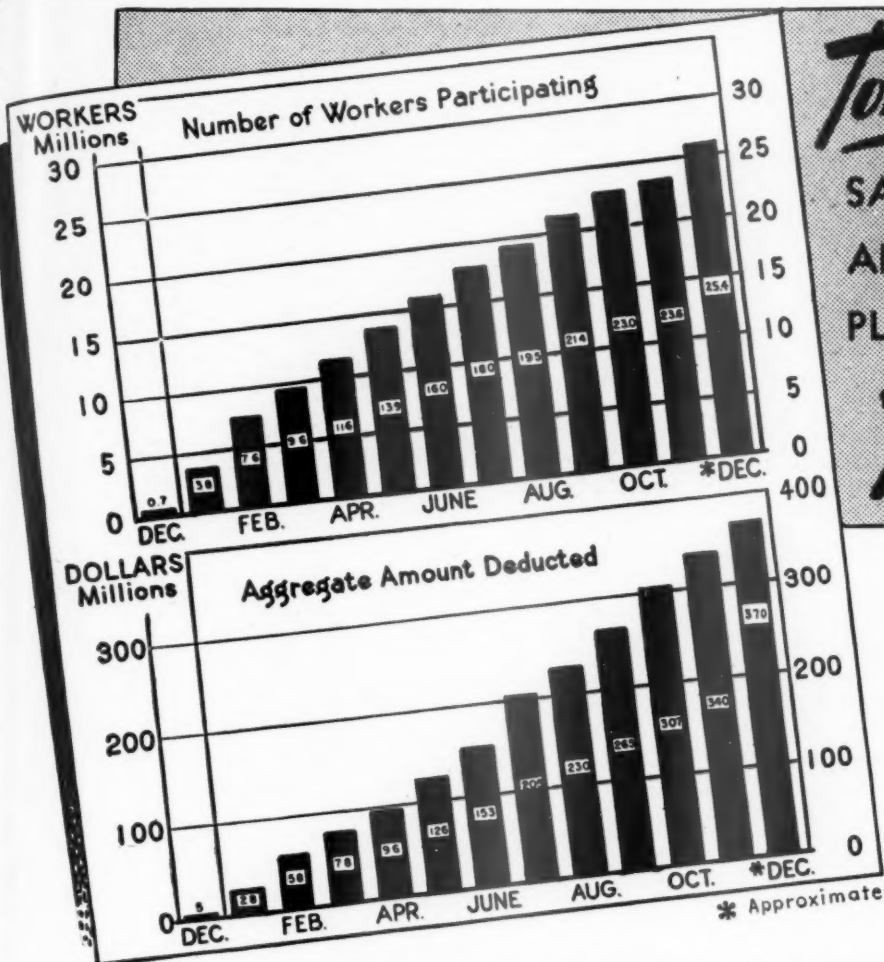
• **Embraces All Levels**—Council headquarters will be in Detroit and will work closely with the Automotive Council for War Production, which fostered the new trade body. The membership includes the aircraft manufacturers themselves, as in the West Coast and eastern aircraft councils, and producers of engines, airframes, propellers, carburetors, instruments, landing gears, and other accessories.

Members will assist all companies engaged in aircraft production through interchange of information relating to production techniques, engineering improvements, and materials savings. This agenda was arrived at by the representatives of major companies, officers of Wright Field, and government officials.

• **Liaison With WPB**—Most potent point of contact of the new group with the government will be through the Aircraft Scheduling Unit of WPB, the claimant agency of the Controlled Materials Plan concerned with plane procurement.

The charter members chose Ernest R. Breech, president of Bendix Aviation Corp., as their chairman. Executive committee members include representatives of Goodyear, Packard, Republic Aviation, St. Louis Aircraft, Thompson Products, General Motors, Ford, and Chrysler.

• **Fourth Council Seen**—This third organization of the aircraft companies may not be the last. Work is in progress toward setting up a fourth, consisting of the midwestern companies clustered around the Mississippi and in Texas.



Tomorrow's

SALES CURVES
ARE BEING
PLOTTED . . .

Today

THESE CHARTS SHOW
ESTIMATED PARTICI-
PATION IN PAYROLL
SAVINGS PLANS FOR
WAR SAVINGS
BONDS (Members of
Armed Forces Included
Starting August 1942)

STUDY THEM WITH AN EYE TO THE FUTURE!

There is more to these charts than meets the eye. Not seen, but clearly projected into the future, is the sales curve of tomorrow. Here is the thrilling story of over 25,000,000 American workers who are today voluntarily saving close to **FOUR AND A HALF BILLION DOLLARS** per year in War Bonds through the Payroll Savings Plan.

Think what this money will buy in the way of guns and tanks and planes for Victory today—and mountains of brand new consumer goods tomorrow. Remember, too, that War Bond money grows in value every year it is saved, until at maturity it returns \$4 for every \$3 invested!

Here indeed is a solid foundation for the peace-time business that will follow victory. At the same time, it is a real tribute to the voluntary American way of meeting emergencies that has seen us through every crisis in our history.

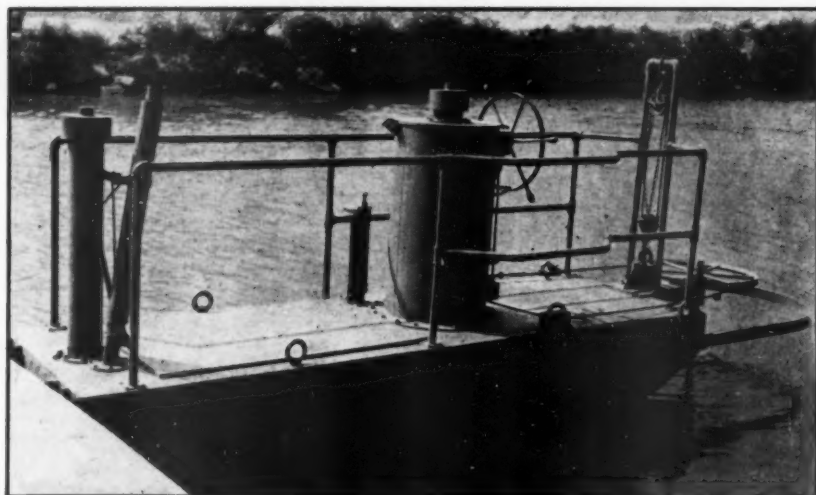
But there is still more to be done. As our armed forces continue to press the attack in all quarters of the globe, as war costs mount, so must the record of our savings keep pace.

Clearly, on charts like these, tomorrow's Victory—and tomorrow's sales curves—are being plotted today by 50,000,000 Americans who now hold WAR BONDS.



Save with
War Savings Bonds

This space is a contribution to America's all-out war effort by
BUSINESS WEEK



Tractors Afloat

Chrysler's novel tugboat is ready for warwork but bids for a peacetime job in shipping throughout the world.

After several months of secrecy while production got under way, Chrysler Corp. is holding open house for its newest baby—a water tractor. Military work is the first assignment for the new craft, but its future on the world's waterfronts seems bright.

• **A Light Tugboat**—The marine tractor is exactly what its name implies—a small, shallow-draft vessel for light tugboat duties. Lacking the power of tugs, it cannot be used for large vessels, but it is big enough to warp scows in and out of dock. Small enough to be carried on a cargo ship as a lifeboat, the tractor can be hoisted overboard for ferry trips between ship and shore.

In appearance, the marine tractor is one of the oddest vessels that ever floated. It looks like an enlarged version of a closed cigar box, topped with a stubby tube which carries a steering wheel and a few instruments. In use,

the tractor's blunt bow is made fast to its tow.

• **Experiments Successful**—Tests on the Detroit River proved the new contraption thoroughly capable of "hazing" scows of the sort that moves a good share of the world's goods between ships and shallow ports.

In military operations, the water-babies can speed landings of men and material on virtually any coast, given reasonably fair weather.

• **Expensive Power Plants**—Crude as marine tractors appear, they are built with precision engineering. Chrysler marine engines power them through reduction gears which turn a slow propeller in the beveled stern.

The new craft's price tag is not revealed, but its comparative simplicity suggests a fairly low figure. The hull is primarily plain ship plate, much heavier than auto body sheet, but inexpensive nevertheless.

• **Operation Costs Low**—Obviously a tractor costs but a fraction of the \$40,000 price tag on the average tugboat. Operation and maintenance costs also are low. Only one man is required to operate the marine tractor, compared with a crew of at least four on a tug. Fuel consumption is much less than a tug's.

Tiny but plenty powerful are Chrysler's odd-looking little marine tractors which can push a loaded scow about with a fair amount of speed and navigate in water too shallow for the average tug. Box-like in appearance, the water tractor has a standard Chrysler marine engine below deck with a reduction gear to transmit power to a slow propeller in the beveled stern.

Wood Pays Off

By switching to plywood, Standard Register saves metal, aids a stricken firm, and goes into war work.

The War Production Board has unveiled a laminated plywood autographic register, an office machine formerly made entirely of metal. Though widely used in war industries and government offices for handwritten reports and orders, manufacture of these and other office machines containing critical metals was blocked by WPB's steel conservation order (M-126) last May.

• **Three Big Benefits**—The new register was developed by Standard Register Co., Dayton, Ohio. It accomplishes three important things: conserves metals, releases a metal-working plant for war contracts, employs a plywood plant that was seriously menaced by cancellation of orders for radio cabinets.

In releasing news of the new non-metal register, Nathaniel G. Burleigh, director of WPB's service equipment division, voiced his hope that manufacturers of other types of office machinery would follow Standard's conservation methods.

• **Glass and Plastics Tried**—Standard's peacetime autographic register was made of aluminum, steel, and a little brass. Engineers experimented none too successfully with glass, then with plastics which became critical themselves. The next al-



CONCRETE

halts the spread of fire

The 200 million dollar Chicago fire of 1871, spread from one small blaze because of the absence of firesafe building construction. The year after this great fire occurred portland cement was first manufactured in this country. Since then, portland cement concrete construction has safeguarded thousands of homes, factories and public buildings in cities, towns and on farms.

Concrete is a foe of fire, not only because it will not burn, but because it has great strength, ruggedness and stability to stand up under

severe fire exposure. In munitions plants, military warehouses and war industry buildings concrete construction is an effective barrier against fire hazards.

Since the bulk of needed ingredients are found in most localities, use of concrete saves labor, transportation and critical materials.

When peace comes, concrete will serve countless construction needs because in addition to firesafety, the qualities of weather resistance, strength and low annual cost make its choice logical for a thousand uses.

When you build, consider concrete.

PORTLAND CEMENT ASSOCIATION

Dept. A3d-12, 33 W. Grand Ave., Chicago, Ill.

A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work

VALUABLE FLOOR SPACE IS USED ONLY FOR PRODUCTION WHEN MATERIALS HANDLING SPEEDS

Through Industry's Air Lanes



● Want more space for more machines so your present plant can better meet the Nation's needs? Looking for *more manpower*? You may find the answer to *both* needs by looking to the **AIR LANES** in your plant. Are you using the ceiling for materials handling? If not, there's your clue.

When you handle materials on the ceiling with a Louden Overhead Material Handling System, you uncover additional production space. You get handling out of the way of production so your operators work with increased freedom and *speed*. You unify materials handling, you eliminate bull labor and rehandling, you reduce the time and labor involved in nearly every manufacturing and assembly operation. You speed handling and transportation of materials, parts and finished products all the way through your plant. And you release vital men into vital production operations.

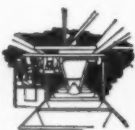
Louden has a wide range of equipment . . . to handle anything from 10



More Production from the Same Plant

Louden Monorail tracks, hoists, conveyors and cranes speed and simplify handling, processing, elevating, conveying . . . uncover new production space.

A typical example . . . the cab-operated, motor-driven crane and hoist, especially useful where materials are transported long distances, or where an operator must accompany the load.



FREE Materials Handling MANUAL



64 pages, facts, photographs, installations. How to handle all kinds of materials in all kinds of plants. Man-, time-, space-saving methods. Write for free copy today.

pounds to 10 tons. Louden offers you broad engineering experience. Doubled plant capacity permits unusually prompt delivery on many items. Come to Louden for a solution of your materials handling problem. Write or wire TODAY. The Louden Machinery Company, 5213 E. Superior Ave., Fairfield, Iowa.



LOUDEN OVERHEAD MATERIAL HANDLING SYSTEMS
Untangle Men, Machines, Manufacturing and Material Handling

ternative was wood. Aided by the U.S. Forest Products Laboratory, the company developed a noncritical plywood that compared with steel and aluminum in durability and performance.

Now register cabinets and mechanisms are being made of plywood or hard wood. The plywood is a criss-cross lamination of walnut, basswood, or gum wood with a binding material that is impervious to moisture. The only metal used is steel (5 oz.) for such parts as springs and joining hardware.

● **Conversion Problem Solved**—WPP has authorized production of a specified quantity for war industries, government and essential civilian needs. The plywood model, however, posed new problems—the company's production equipment was not convertible to it.

Monticello Cabinet Co., Monticello Ind., finally was given the contract for building the new registers. Monticello formerly made radio cabinets and light furniture, was hard hit by the war. Its assembly lines were reset, and quantity production now is getting under way.

● **Standard's Product Changed**—There remained the question: What to do with Standard Register's equipment that had been turning out the metal model. Again conversion was the answer. These machines are now busy making gages, gas booster pumps for airplanes, valves, radio parts, and other war items.

EXTRUDED RUBBER

The tire industry always has felt that rubber could be extruded like plastics or metals, but it was only last week that a tested and proved process was announced. Describing it as a new and revolutionary means of saving time and materials, United States Rubber Co. unveiled the process in a new factory formerly occupied by Hupp Motor Car Corp. at Detroit.

The method is described as simplicity itself. Billets of warmed, milled rubber are put in a cylinder. The ram of a medium press comes down on the cylinder, squeezing the rubber through a comparatively small hole. Pressure heats the rubber close to the vulcanizing point, forcing it, liquefied, into molds.

Equipment and operating costs are lessened, and the process also is said to afford a better "cure." Rubber is heated uniformly throughout rather than from the outside, as previously.

Special new presses designed by U.S. Rubber, comprising four columns and a central ram, are now in operation on treads for Army tanks and other mechanical rubber goods.

U.S. Rubber is making the process available to all other manufacturers producing war materials. Postwar battles for title to the idea are a distinct possibility. Patent claims already filed in Washington are based on processes for extruding rubber under pressure.

LABOR

Formula Holds

Unionists on NWLB are devoted but will press their fight against the Little Steel doctrine of wage increases.

Organized labor lost the first round in its fight to break the Little Steel formula which confines wage increases to 15% above the January, 1941, level of wage rates, but union spokesmen emphasized that one round did not end the fight.

Solid Minority—In a vote on the A.F.L.'s petition for a policy change to permit wages to keep pace with the cost of living (BW—Mar.20'43,p5), the National War Labor Board this week voted eight to four to preserve the Little Steel limitation. A.F.L. and I.O. representatives make the solid minority.

In a second vote on another A.F.L. request, that the meat packing decision (BW—Feb.20'43,p7) and West Coast aircraft decision (BW—Mar.6'43,p5) be reconsidered, NWLB again said "No," this time in a seven-to-five division. Wayne Morse, public member, voted with the unionists, maintaining that in these two cases inequities existed and



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required exception to the Little Steel rule. The Morse position is considered to exemplify the basis for a possible compromise between the unions and the Administration under which the Little Steel principle would be preserved, but departures from it in many cases would be permitted.

● **Weekly Wages Stressed**—For the moment, however, such a compromise is not acceptable to the unions, nor is it being formally offered them by the board's majority. Industry representatives on NWLB insist that the "take home" pay of labor is the true measure of ability to maintain an adequate standard of living. In making weekly wages rather than hourly rates the central consideration, the industry bloc has the support of a majority of public members.

That the labor group is keenly dissatisfied with the board's rejection of the A.F.L. petition is a matter of record. A.F.L. and C.I.O. spokesmen declared that the fight against the formula would be continued. Nothing explicit was said about union withdrawal from NWLB membership, but Robert Watt, speaking for the A.F.L., was considered to have hinted at that possibility in an ominous statement in which he said that the decision would be accepted by labor "only for the time being."

Work Drive Due

While Congress considers an antiabsentee bill, WPB and manpower authorities prepare a joint campaign.

House Naval Affairs Committee approval of the Johnson bill that would force employers to report absenteeisms brings the question of work attendance directly before Congress. Although the measure has been a target for labor leaders and some New Dealers, sections of the Administration are supporting it— notably the Navy and War Dept.

● **An Indirect Approach**—Accorded a better-than-fair chance of passage, the bill (contrary to popular conception) is not a "work or fight" proposal. In fact the widespread division of support and opposition proves the bill is not strong enough to line up a determined battle—for or against.

Under the bill, any request for draft deferment of an employee on occupational grounds must be accompanied by his attendance record. The War and Navy Depts., the Maritime Commission, and all war contractors also must supply the Dept. of Labor with names of workers absent without good cause.

● **No Direct Penalties**—It is assumed that a draft board will give substantial weight to a registrant's work attendance

What's Happening to the Cost of Living

	Food	Clothing	Rent	Fuel, Ice, & Electricity	House Furnishings	Misc.	Total Cost of Living
August, 1939.	93.5	100.3	104.3	97.5	100.6	100.4	98.6
January, 1941*	97.8	100.7	105.0	100.8	100.1	101.9	100.8
February	97.9	100.4	105.1	100.6	100.4	101.9	100.8
Feb., 1942 . . .	116.8	119.0	108.6	104.4	119.7	109.4	112.9
March	118.6	123.6	108.9	104.5	121.2	110.1	114.3
April	119.6	126.5	109.2	104.3	121.9	110.6	115.1
May	121.6	126.2	109.9	104.9	122.2	110.9	116.0
June	123.2	125.3	108.5	105.0	122.3	110.9	116.4
July	124.6	125.3	108.0	106.3	122.8	111.1	117.0
August	126.1	125.2	108.0	106.2	123.0	111.1	117.5
September . . .	126.6	125.8	108.0	106.2	123.6	111.4	117.8
October	129.6	125.9	108.0	106.2	123.7	111.8	119.0
November . . .	131.1	125.9	108.0	106.2	123.9	112.7	119.8
December . . .	132.7	125.9	108.0	106.3	124.1	112.8	120.4
January, 1943.	133.0	125.9	#	107.3	123.7	113.1	120.6
February . . .	133.6	125.9	#	107.1	123.9	113.5	120.9

Data: U. S. Bureau of Labor Statistics; 1935—39=100.

* Base month of NWLB's "Little Steel" formula.

Rent figures released quarterly.

in considering his essentiality, that this factor will deter absenteeism. The bill does not provide direct penalties for delinquent workers.

Making it necessary for war contractors to report all absences will provide the government with information on workers not subject to Selective Service. This information will be the basis for whatever future legislation is required.

● **Government Drive Is Slated**—Meanwhile a national antiabsentee campaign, conducted jointly by the War Production Board and the War Manpower Commission, is scheduled. Based on an extended study by the Production Information Committee, composed of representatives from all the major war agencies, the corrective program is almost ready for release by WPB's Labor Production Division and WMC.

The federal program will attempt to utilize existing labor-management plant committees by urging them to take plant and community action to slice absence rates. Getting plant groups to analyze causes of absence and deal with each as a separate problem is a method that promises the most fruitful results (BW—Feb. 6'43, p34).

● **Absence Rate Halved**—Experience of Stromberg-Carlson Telephone Mfg. Co., Rochester, N. Y., in cutting an unduly high absence rate to an average of 3% or less—a reduction of more than half—testifies to the efficacy of a cooperative attack on the problem. A bulletin board gives employees a day-to-day progress record.

Stromberg-Carlson's labor-management committee started by conducting a survey which revealed that absences were attributable to the following causes: personal illness, 60% (43% of them colds); family illness, 16%; personal business, 16%; claimed transportation difficulties, 8%.

● **Banking Hours Extended**—Further probing revealed that business reasons in many instances pertained to inadequate banking facilities for employee working overtime. The committee took the data to the president of a Rochester bank who presented it to the Rochester Clearing House Assn. Banks now remain open to 9 p.m. Monday night crowded with war workers.

Health problems were attacked from many angles. Bulletin boards and posters were used to educate workers against the spreading of colds; a campaign was started to get employees to use municipal recreation facilities; the company cafeteria was investigated as a possible source of dissatisfaction.

● **Health Feeding Started**—A wholesale housecleaning in and around the cafeteria was carried out, and experts were brought in to reorganize feeding facilities. The committee also has recommended that medical experts be retained to devise methods of stepping up cold-resistant vitamin feedings that can be given employees at cost or less.

Aid in preparing tax returns was provided as a personal business time saver for employees. Car clubs were intensively promoted, and, in cooperation with other Rochester plants, city transportation facilities were adapted and adapted to the needs of war workers.

CHEMICAL WARFARE ENDED

Apparently dissuaded from its ambitions to build a huge new union in the chemical industry, the United Mine Workers of America, District 50, has withdrawn from two union elections at Niagara Falls. The withdrawals followed two defeats by the C.I.O.

District 50 opened its bid to capture the Falls area by sending about two dozen organizers to Buffalo after the



Wheels for ships

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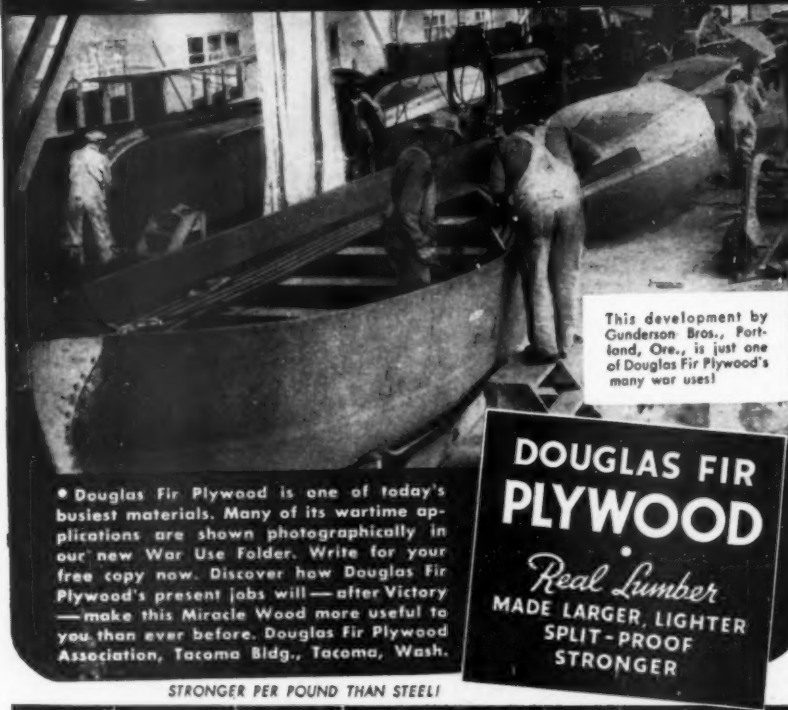
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STRONGER PER POUND THAN STEEL

C.I.O. president, Philip Murray, and the U.M.W.A. chieftain, John L. Lewis, split up in June, 1942.

The first test occurred at the Great Lakes Carbon Co. plant which voted two-to-one for the C.I.O. United Gas Coke & Chemical Workers. In the second, the C.I.O. won the key to the Falls-Carborundum Co.'s plant—by a small majority, and District 50 protested.

U.M.W.A.'s withdrawal from balloting at the Niagara Alkali and Isco Chemical plants is taken as indication that District 50 leaders saw the handwriting on the wall in the Carborundum poll. Thus Lewis's catch-all union appears ready to evacuate the Falls region, perhaps to turn up in another field.

G.M. Seeks Help

Troubled by its organizing foremen, the motor giant asks Congress for exemption from an NLRB decision.

General Motors Corp. went to Congress last week for relief from a situation created by law and labor organization. The company's action may point a new trend in which management will appeal directly to the legislative branch for aid against what is considered some particularly onerous type of union activity.

• **Troubled By Foremen**—General Motors set no precedent. Shipbuilder Henry J. Kaiser told his troubles to more than one congressional committee when he became involved in a jurisdictional dispute between the A.F.L. and C.I.O. (BW—Feb. 20'43, p88). Other industrialists have done the same, but the G.M. approach was more direct.

The motor giant's worry is a demand by the independent Foreman's Assn. of America for recognition as representative of foremen at G.M.'s Detroit Diesel Division. Thus the appeal requested exemption of supervisory employees from jurisdiction of the National Labor Relations Board which had ruled coal mine foremen are covered by the Wagner Act.

• **Union Claims Strength**—The Foreman's Assn. already has a contract with Ford Motor Co. (BW—Feb. 20'43, p92) holds an election victory at Packard (BW—Mar. 6'43, p90), and claims 13,000 members in about 20 Detroit plants. The union has done most of its organizing without NLRB help, would not be hit seriously if Congress granted G.M.'s request.

General Motors's plea was made in telegrams to four congressional committees and signed by the company president, Charles E. Wilson. Within 24 hours, Rep. Howard W. Smith planked down a bill to discourage foreman or-

ization and at the same time to cur-
all other forms of union activity.
Coal Union's Status—Meanwhile, in
with NLRB's decision and in bliss-
disregard of possible effects on the
al wage negotiations (page 7), the
United Mine Workers of America pro-
ceeded with its plans to absorb the
mine foremen's union.

WAGE REGULATION TIGHTENED

Some congressmen may be in a mood
to scuttle salary stabilization, but the
Bureau of Internal Revenue doesn't
make its policy from the Congressional
record. Responsible for salaries over
\$5,000 a year under the terms of the
Emergency Price Control Act,
Internal Revenue has just promulgated
new regulations which provide stronger
penalties on employers who have raised
lowered compensation rates without
federal sanction.

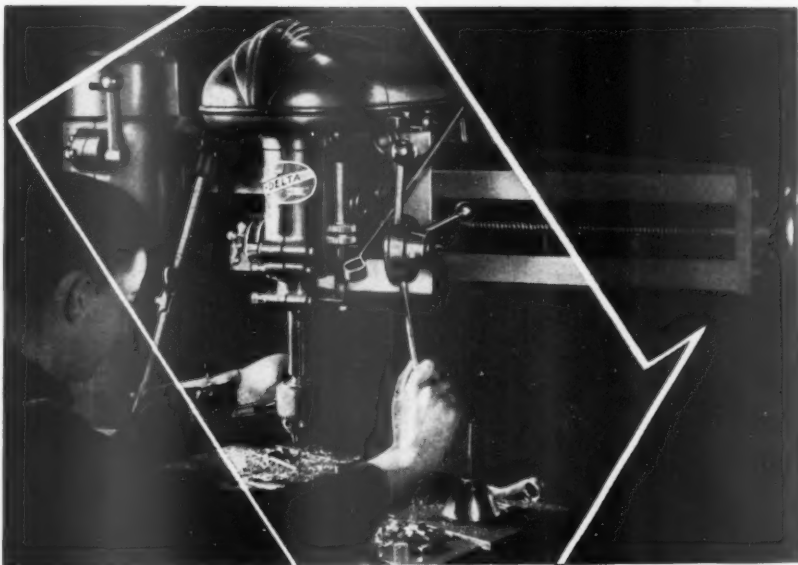
In effect, the new regulations pro-
vide that the total amount of the illegal
payment is not deductible from the em-
ployer's individual or corporate income
tax. Thus, if an employee's salary was
raised from \$100 a week to \$150 a week
without authorization, no part of the
\$50 is deductible as an operating ex-
pense. Similarly, if a salary was reduced
from \$150 to \$100 a week without gov-
ernment permission, no part of this
payment may be deducted.



GOGGLES GIRL

Recent government estimates that
three out of four war workers have
faulty vision or are liable to eye in-
juries have convinced the Hudson
Motor Co. that an ounce of preven-
tion may be the solution. At their
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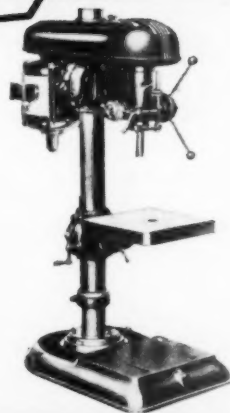
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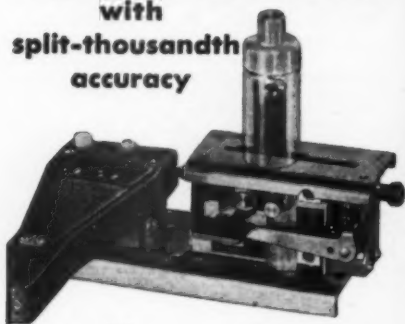
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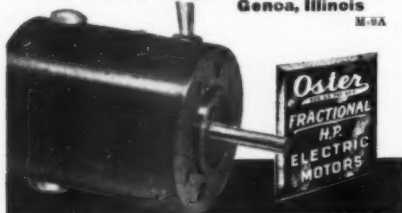
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BEAUTY IN THE SHOP

Beauty and war production have been teamed by the N. A. Woodworth Co., Ferndale, Mich., which has set up its own beauty salon to combat absenteeism and keep feminine morale high. Woodworth's beauty shop boasts a big lounge, a cosmetic bar (above), and a contingent of booths (right) where nine operators give shampoos, waves, and facials seven days a week from 8.30 A. M. until 9 P. M., but only to ladies off duty. To reduce absenteeism among its 3,000 women workers, Woodworth offers beauty treatment awards for perfect attendance records ranging from six- to twelve-week periods.



Manpower Shifts

WMC reshuffles its list of industrial areas to meet changing conditions in labor supplies.

The War Manpower Commission has reranked some of the communities in its list of 270 industrial areas which are classified in terms of their labor supply (BW—Feb20'43,p14), and developments that necessitated the shuffle have served again to remind Washington that there is nothing either static or consistent about the character of the labor market. The manpower problem, which is proving to be the war effort's ultimate bottleneck, has a different configuration in different areas and, even in the same area, sometimes presents

a different pattern at different times. • **How They Stand**—WMC's list ranks the principal manufacturing centers primarily for the guidance of procurement agencies. In Group I are areas in which labor shortages have become acute—where no new contracts should be placed and where deliveries on contracts already let are made uncertain by the manpower scarcity; Group II embraces areas having a balance of labor supply and demand but which threaten to develop acute shortages within six months; in Group III are centers with an adequate labor supply which will be in balance within six months; and in Group IV are the towns where there is a surplus of labor and where no shortage is anticipated.

Shifts in supply and demand within the past few months have dropped three communities out of Group I. Now in Group II are Akron, Ohio; Bath, Me.; and Portsmouth, N. H. But seven areas

have moved up into Group I. They are Portland, Me.; Burlington, N. C.; Evansville, Ind.; Gary-Hammond-South Chicago; Tampa, Fla.; Savannah, Ga.; and Wilmington, N. C.

• **Easing in Spots**—An indication that the labor market is easing in a few communities is the transfer of Berwick, Pa.; Benton Harbor, Mich.; Madison, Wis.; and Pontiac, Mich., from Group II to Group III. Moved up, however, to Group II from Group III are Johnstown, Pa.; Charlotte, N. C.; Loraine, Ohio; Aurora and Chicago, Ill.; Jacksonville, Fla.; Oklahoma City, Okla.; and Galveston, Texarkana, and Houston, Tex.

The precision with which WMC designates its areas is indicated by the way it sliced Chicago into two sections for purposes of putting the South Side steel mill district into Group I. The demarcation line is the angle formed by the intersection of South Ashland Ave. with 82nd St. Employers inside these limits, which run east to Lake Michigan and south to include Indiana's Porter and Lake counties, must institute a 48-hour week and hire all personnel through the United States Employment Service. The rest of Chicago, in Group II, continues with an unchanged work week and with its traditional employment practices.

• **Loss of Contracts Feared**—Chicago business organizations, like Detroit employers last year, are protesting WMC's classification in the fear that they will be debarred from securing further war contracts.

KANSAS HITS UNION AGENTS

A severe antiunion measure became law in Kansas this week as Gov. Andrew Schoeppel signed an experimental labor-control bill that may be the pattern for similar legislation in other states (BW—Mar. 16 '43, p. 15).

The new statute makes it necessary for union business agents to obtain state licenses, and for unions to file audited reports of income, dues, assessment rates and officers' salaries. A long list of activities become illegal among which are striking without a vote of the members affected, jurisdictional disputes, and sitdown strikes. Violations are punishable by fine up to \$500 or a six months' term in jail, or both.

Enactment of the measure was speeded by a threat of the Coffeyville (Kan.) Central Labor Council, which told the legislature that if the bill was passed, a labor holiday would be called. That ultimatum was accepted as a challenge, and the House of Representatives hammered the measure through.

The experiment in Kansas will affect some of the major organizations affiliated with both the A.F.L. and C.I.O. Meat packing, aircraft manufacturing, food processing, and trucking are largely unionized in the state.



Illustrated by
Herbert Morton Stoops

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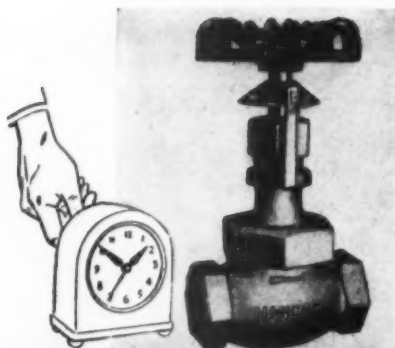


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FINANCE

Lessons in Erie

ICC declines to come out flatly for competitive bidding but forces road to seek tenders; debt cut also advocated.

Although the Interstate Commerce Commission sidestepped a decision on competitive bidding for rail securities, it refused to approve the controversial \$14,000,000 bond issue of the Erie Railroad (BW—Feb. 27 '43, p105). Wall Street knows how to take a hint as broad as that. When the Erie reappeared in the market this week, it asked for competitive bids on its new offer of \$10,000,000 in collateral trust notes.

• **Feather in Young's Cap**—Bankers still haven't decided how much they should read into the ICC decision, but most of them think it will give competitive bidding a pretty substantial boost. Throughout the hearings, Erie officials found themselves defending the principle of negotiated sale against critics like Robert R. Young, belligerent chairman of Alleghany Corp., and Carl E. Newton, president of Alleghany-controlled Chesapeake & Ohio (BW—Feb. 13 '43, p101). No matter what Wall

Street may think of the decision, Young and his allies regard it as a victory for competitive bidding.

The commission, however, steered clear of the main question, and it also went out of its way to explain that it was not criticizing the price the Erie negotiated for its bonds with Morgan Stanley & Co., traditional underwriters of rail securities. Main basis for the decision was the ICC's long-standing policy of forcing railroads to take every opportunity to cut down their outstanding debt.

• **Basic Plan Criticized**—The Erie had intended to substitute \$14,000,000 worth of 3½% bonds for \$14,000,000 in 4% collateral trust notes which it had just repurchased from the Reconstruction Finance Corp. The commission ruled that the advantages of refinancing were not enough to justify the expense. In effect, it ordered the Erie to retire at least part of the debt instead of refloating it.

More encouraging to advocates of competitive bidding were the commission's remarks on the general subject of pricing. It flatly refused to accept the argument that railroads are likely to endanger their credit if they force underwriters to pay too high a price for their securities. The Erie, it said, should have explored the possibilities

War Bonds Yield Tax Money

Taxpayers cashed in a lot of their war bonds in the first two weeks of March as they scraped up money for first instalments on income taxes. In comparison with the total amount outstanding, redemptions were unimpressive, but they cut a surprisingly large slice out of the Treasury's revenue from bond sales (BW—Jan. 16 '43, p84). By Mar. 17, two days after tax payments had cleared, redemptions for the month totaled \$84,000,000. In the entire month of February they amounted to only \$76,000,000, and in January, they were only \$63,000,000.

Redemptions in the first 17 days of March amounted to 17% of sales, the highest ratio recorded since the Treasury began selling war bonds nearly two years ago. This is only about 0.6% of the total outstanding (excluding "baby bonds" sold before the defense program), but it is more than twice the rate of redemption in previous months.

In some cases, taxpayers probably overestimated, and the money may

go back to the Treasury in sales of new bonds. One New York savings bank reports that, on Mar. 16, it was surprised when it did the biggest deposit business of the year which may indicate such overestimation.

Figures in the following table are in millions of dollars (amount outstanding is total of series E, F, and G bonds):

Month	Sales	Redemptions	Outstanding
1942			
January	\$1,074	\$15	\$3,580
February	711	16	4,277
March	565	22	4,824
April	536	21	5,342
May	640	22	5,964
June	642	23	6,584
July	915	26	7,468
August	706	32	8,143
September	762	34	8,873
October	942	40	9,777
November	741	43	10,476
December	1,026	55	11,447
1943			
January	1,259	63	12,637
February	898	76	13,458
March*	487	84	13,861

* First 17 days.

of getting a better offer before it closed the deal with Morgan Stanley & Co.

• **Debt Theory Accepted**—In any case, the Erie is taking no chances with its new attempt to market an issue. It is calling for competitive bids, and it is selling only \$10,000,000 worth of obligations instead of \$14,000,000. Moreover, \$2,960,000 of the proceeds will go to retire a 5% bond issue which matures next July. This means net reduction in funded debt will approach \$7,000,000.

Terms of the collateral trust notes commit the Erie to a comparatively rapid retirement of the whole amount. The notes will mature \$500,000 annually for the first nine years with the balance of \$5,500,000 falling due in the tenth year. From the ICC's viewpoint, this is all to the good, but some railroad men think the road would be better off if it could sell a 15-year bond as it first intended. This would avoid fixed maturities in the first years of the post-war period.

• **New Policy on Equipment**—Besides the Erie decision, bankers last week saw another straw in the wind that seems to point toward competitive bidding. The commission served notice on railroads that hereafter it will not approve the practice of issuing promissory notes to evidence debt for conditional sales contracts for purchase of equipment. In the last few years, a good many roads have been using the conditional sales contract to avoid issuing equipment trust certificates, which are subject to close supervision by the ICC. Recently they have asked permission to issue promissory notes against these debts so they will qualify as borrowed capital under the excess profits tax law.

Until now, the commission has approved the note issues, but, according to its latest announcement, it will refuse permission in any case where the sale was concluded after Jan. 1, 1943.

Paper that Pays

Check cashers go to town on war payrolls, but they still bother employers. Chicago group seems established.

Income tax day may have brought joy to very few hearts outside of Internal Revenue, but it actually was a bonanza to Chicago's depression-born currency exchanges. Customers literally flocked to them to buy money orders with which to pay taxes.

• **Business Doubled**—Operators won't give any dollar figures, but they admit they did pretty nearly double the Mar. 15 business of a year ago and right around 24 times that of 1941. Banks that deal with them were astonished by

Our Customers Chart Our Course



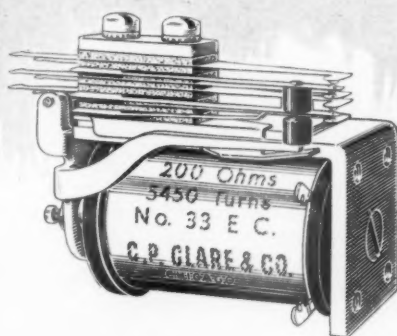
TODAY, when new fields of scientific knowledge are opening up so rapidly, it is more than ever important that the application of those discoveries to industry should not be hampered by mechanisms that are rapidly growing obsolescent.

Clare "Custom-Built" Relays were created to free the industrial designer from the limitations of ordinary telephone-type relays. By "custom-building" a relay to meet his specific requirements, Clare assures the designer of the flexibility of application essential to the increasingly complex demands of modern designing.

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It is only this interchange of ideas between the designers and our engineers that makes possible the continued evolution of Clare "Custom-Built" Relays along the lines indicated by industrial development of today—and tomorrow.

Let us know your relay requirements. Our engineers will "custom-build" the relay that meets the application in your designing problem. Ask for the Clare catalog and data book. C. P. Clare & Co., 4719 Sunnyside Ave., Chicago, Ill. Sales engineers in all principal cities. Cable address: CLARELAY.



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Short Coil Relay

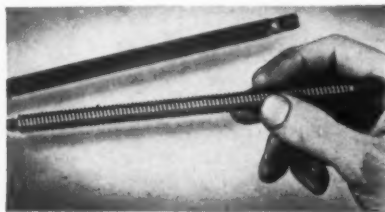
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PRECISION PARTS

PUTTING SOME VERY SPECIAL SCREWS TO HITLER

Like most of the precision work that Ace men and women are now machining and grinding with an accuracy that makes paper seem mattress-thick, this jack-screw has an unmentionable part in war aviation. Let's just say it helps add many miles per hour to fighter planes.



• Double lead, close tolerance.

But that needn't keep us from telling you that it is over six inches long and that its thread tolerance is "plus 0, -0.0005." And if you study it carefully you'll see that it has a dual lead—two threads parallel with each other.

There's only one way to get accuracy like that into thousands of Ace threads. You have to grind the threads, and if you have to grind them in quantity you'll be wise to send them to Ace. For Ace knows production-grinding, and can perform tricks of Centerless, Thread, and Surface Grinding that are imperative in wartime and will be equally imperative to your post-war product. Our Thread-Grinding department is now at capacity, but for all other metal parts which combine accuracy and volume, have an Ace up your sleeve. We will welcome samples or sketches.

Capacity open except in threads.



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THE MARKETS

Stock prices this week were sensitive mainly to the war news, other important stimuli being lacking. The early successes in southern and central Tunisia, in fact, were sufficient to induce buying that quickly wiped out the minor setback recorded at the close of last week.

• **Indifferent to Tax Bill**—This is the first time in many years that Congress has considered a tax bill without the market's taking any real interest. This time it appears that corporate taxes can go little higher if, indeed, they can be boosted at all.

Yet the mere fact that there is no expectation that tax rates will be upped brings investors no solace when they ponder corporation earnings and the return on common stocks. The hitch is that costs are going up (page 13) while gross income will rise nowhere nearly as fast as it did last year.

• **Straws in the Wind**—The probability that the Little Steel wage formula (page 95) will be broken despite present efforts to uphold it, and that farmers will get higher prices through a restatement of parity are straws in the wind to anyone looking at the costs of doing business.

Companies that bettered 1941 net income during 1942 were not uncommon but they were, nevertheless, in the minority. Those that top 1942 during the current year stand to be a rarity.

The basic factors in this situation were put succinctly by Moses Pendleton, president of American Woolen, at the company's annual meeting: "It now appears that woolen mills will operate at capacity or near capacity through most of the year. The margin of profits may be materially lower. Our prices are regulated by ceilings . . . and costs show a

tendency to increase in spite of the efforts of the government to regulate wages and the cost of wool and other raw materials."

• **Will Affect Dividends**—These factors will be getting increasing attention as boards of directors meet for consideration of dividends in the months to come. Many companies have already reduced payments on their common stocks (BW—Feb. 20'43, p103). Others have held disbursements down to extraordinarily conservative levels compared to per share earnings in order to accumulate additional working capital needed to handle today's record volume. These trends will be accentuated in the months to come.

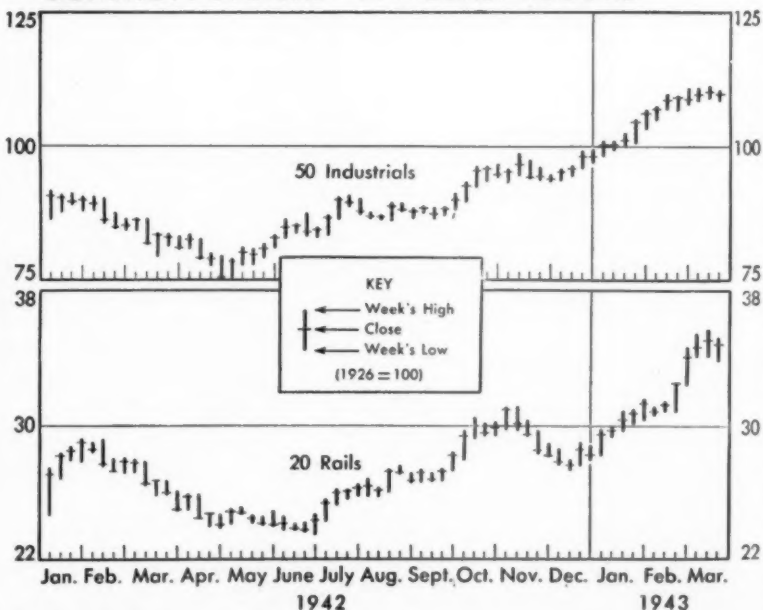
The effort of Giuseppe M. Bellanca to regain control of the aircraft company bearing his name was carried to a successful conclusion this week after the setback a few days ago (BW—Mar. 20'43, p107). Bellanca has gone in as chairman, and one of Andrew Higgins's boys, Col. John H. Jouett, is the new president. L. C. Milburn, who headed the deposed management, was named executive vice-president and general manager.

Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
Stocks				
Industrial . . .	109.7	110.2	109.0	82.8
Railroad . . .	34.8	35.1	32.5	26.0
Utility . . .	42.4	42.8	42.2	30.4
Bonds				
Industrial . . .	117.7	116.8	116.3	106.0
Railroad . . .	95.5	95.3	92.5	89.5
Utility . . .	112.2	112.0	111.8	102.4
U. S. Govt. . .	109.4	109.5	109.7	110.9

Data: Standard & Poor's Corp. except for government bonds which are from the Federal Reserve Bank of New York.

COMMON STOCKS—A WEEKLY RECORD



Data: Standard & Poor's Corp.

the incoming flood of cash representing receipts on money orders sold by the currency exchanges.

Chicago's currency exchanges are a sort of mature version of the check cashers who do a flourishing business the country over these days—a business that ranges all the way from a petty racket to a moderately substantial and stable undertaking, depending on the degree of regulation. Fat pay checks from war manufacturers, plants located at a distance from banks, and difficulties of many workers in getting to banks during normal banking hours are among the reasons for the boom.

• **Reputations Vary**—Circumstances surrounding the operations of the check cashers in various localities pretty much govern the attitude of neighboring bankers and of the public toward the business. Take it from one New Yorker who has banked check cashers for years that he's through with them.

This banker no longer will lend the short-term money that is the life blood of the check casher's business. He says flatly that they're a fly-by-night bunch, operating on a shoestring, and that the business they give the bank isn't worth the variegated headaches that go with it. Fees of many, he points out, rob the public, and if they take a few bad checks and the bank comes back at them, they fold up and fade into the night.

• **Employers Ask Banks' Aid**—Many employers, irked by the high rates charged their employees by the check cashers (not to mention the long-term usury of the check buyers), have asked banks to come to the rescue.

Companies have done as has Wright Aero in Paterson, N. J., arranging for a nearby bank to handle employees pay checks. A Chicago company has a novel plan; it doesn't give employees checks but notifies them that the money is in the bank in their names. It's a metered account with the employer paying the service charge on a stipulated number of checks and the employee paying for any that he draws over that number.

• **Old Law Curbs Branches**—West Coast plane manufacturers and shipbuilders have urged local banks to establish permanent, temporary, or even armored-car branches in or near their plants. But a provision of the National Banking Act, dating back to the days of the saddle-bag banker, prohibits national banks' doing business in any but permanent quarters, and many states prohibit branches altogether.

Chicago has a situation that is somewhat out of the ordinary. Illinois bans branch banking, so the big Loop banks can't serve the suburbs. Moreover, outlying banks curled up by the handful during the depression. This combination of factors fostered the rise of the city's money exchanges.

• **Now 480 Operators**—Growth has been phenomenal in Chicago. The North



SO THAT RUBBER MAY GO TO WAR

"Can you furnish up to twenty million feet of hose for use on Stirrup Pumps that does not contain rubber of any kind?"

This was the question addressed to all Hose manufacturers by the Office of Civilian Defense. The War Production Board prohibited the use of rubber in any form for this purpose.

The Goodall Research Laboratories went to work to produce a hose that would be satisfactory for stirrup pump use, that "believe it or not" would contain no form of rubber.

Goodall submitted one of the first samples of all plastic reinforced hose to the Office of Civilian Defense and this new hose was accepted for use on civilian stirrup pumps. Goodall gave the Office of Civilian Defense the detailed specifications on the construction of this hose, so that other manufacturers could help produce the tremendous quantities required.

Goodall's initiative in research helped solve this problem and saved thousands of

pounds of natural, reclaimed and synthetic rubber for government use.

We are prepared to cooperate with you in handling any problems that you may have due to the change-over from Rubber to synthetics.



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Town Currency Exchange says its average increase in business has been 50% every year since it opened shop in 1932. By 1936, there were 150 exchanges in the Windy City; now there are about 480 with estimated weekly turnover of \$5,000,000.

The average money exchange occupies a 12-ft. store with bullet-proof fixtures, employs from one to four persons including the owner, has a working capital of about \$4,000, and supplements its own funds by overnight borrowings from commercial banks to meet unusual demand. The largest operator has 32 such units; most have no more than one. From simple check cashing, they have branched out into money orders, change making, handling utility bills, providing income tax and automobile license service.

● **How the Rates Run**—As would be expected in this kind of business, charges vary widely. Biggest competition is in check cashing, with the lowest rates in the Loop where there are so many operators they have to sit in each other's laps. The rate usually is not over 22¢ per \$100. On the north side, where the exchanges are older and better established, check-cashing rates run up to 40¢ on the \$100. Every once in a while, somebody cuts to 25¢, but the average is around 30¢.

These operators make their own rates on money orders, but most of them stick to the postal rate of 22¢ on the \$100. Utility bills are handled for 5¢ unless they are overdue, in which case the charge is 10¢. Money changing may be on the basis of 1/4%, or it may be graduated at 1¢ a roll for pennies, 3¢ a roll for other coins, 5¢ for \$25 in \$1 bills.

● **Get Along with Banks**—Chicago banks don't have many qualms about the money exchanges. The banks can't set up branches to do the business themselves, and when they deal with a money exchange, they have an endorser they know and can kick back on in case any of the checks cashed go wrong. Banks and the exchanges get along well enough, in fact, so that members of the Chicago Currency Exchange Assn. (with 207 units as members) exchange credit information with the banks.

One bank that caters to currency exchanges reports that, on a typical peak day in 1936, this business meant loans of \$150,000. Today such loans will run \$1,500,000. One typical exchange near a south side war plant has a typical Friday turnover of \$50,000.

In other cities, bankers aren't so kindly to the check cashers, particularly where there is no official regulation of the business. Ambitious check cashers step out and lend money to small business men, always at usurious rates; they even do a small business in receivable financing occasionally. Swindles, as well as exorbitant charges, are common.

THE TRADING POST

Call for "Sandersons"!

Not long ago the engineering firm of Sanderson & Porter who are in charge of a government construction job at Pine Bluff, Ark., advertised in the New Orleans Times-Picayune as follows:

Wanted: Steam-fitter welders, steam fitters, plumbers. Sanderson & Porter, engineers and contractors, Pine Bluff Arsenal, Pine Bluff, Ark.

As a result of this advertisement, the company received the following letter:

"Understand you is in need some sandersons and porters at the plant. I am a porter and like know how much you pays. Also, what is a sanderson and how much does it pay?"

"Can Spring Be Far Behind?"

One of my Midwest scouts reports that the other day while waiting his turn at the regional WPB office in his city, he overheard an official of the Priorities Division dictate an interoffice memo which went like this:

"In regard to the attached request for priority rating for 150 machinists' tool boxes, I would like to call your attention to the following facts. The general merchandise store which wants the boxes is located in the village of near Lake. In the entire village there are probably less than ten mechanics who would be prospects for metal tool boxes. These boxes bear a striking resemblance in size and design to fishing tackle boxes no longer manufactured by order of WPB. During the fishing season this store does a big business in tackle, and possibly it is a coincidence, but the required delivery date as stated in the application happens to be the opening of the bass season."

"That's the Rules"

A man I know stopped at the lunch-counter of the railroad station in his town not long ago to get a bite of lunch before train time. When he ordered ice-cream for dessert the waitress asked him:

"What kind of ice do you want with your ice-cream?"

He allowed that he didn't want any, since he doesn't care for ices.

"Sorry," countered the waitress, "but you'll have to take some ice with your ice-cream. That's the rules."

"Well," he replied, "I don't eat the ice so just give me the amount of ice-cream I'm entitled to and forget the ice."

"I can't do that," was the startling rejoinder, "I'll have to give you the ice with your ice-cream."

So he took his ice-cream, plus the ice, ate the former and left the latter on the dish.

While he was polishing off his ice-cream a man on the next stool to him ordered his dessert. He wanted a dish of orange ice.

"What kind of ice-cream do you want with your ice?" asked the same waitress.

Well, he didn't want any ice-cream—just an ice.

"Sorry," came the stock reply, "but you'll have to take some ice-cream with your ice. That's the rules."

"Well then," he said, "save the ice-cream and just let me have the orange ice."

"No sir, I can't do that. I'll have to give you the ice-cream with your ice."

So he, in turn, took his ice plus the ice-cream, ate the former and left the latter on the dish.

The other man finished first and after he had gone my friend asked the waitress.

"What's the idea of wasting the ice and the ice-cream when the customer doesn't want them?"

"Don't ask me," she replied, "they make the rules down in Washington. I just enforce them!"

Now there are at least a couple of morals to that tale. One is that some of the rules seem to need a lot more interpretation between the point of origin and the point of "enforcement" than they are getting. Maybe they're all right when they're written but by the time they're "enforced" they often don't make sense.

The other is that the manpower shortage has dredged up a sorry lot of marginal "workers," and as we get about we shall need more and more patience in dealing with them.

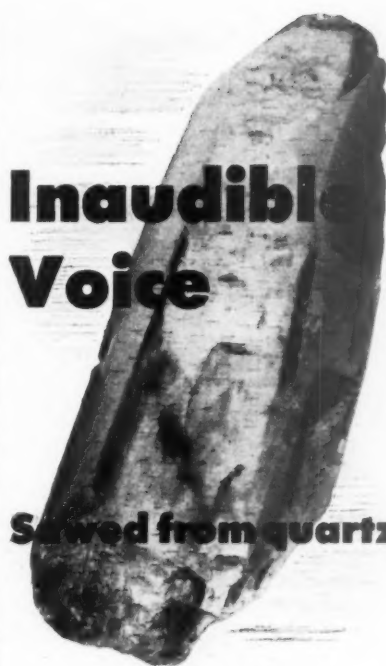
Beyond those, you can roll your own morals.

"Stabilization"

The other day I had a letter from a newspaper man which read in part as follows:

"The manpower shortage again is a major problem to business men in this section. It isn't just a matter of some manufacturing plants with government orders unable to get mechanics. I am personally confronted with it. I have just lost one of my staff of four to the government. The War Labor Board here offered him 2½ times what we were paying him so they took him. We couldn't hold him anyhow, even if we wanted to equal the WLB bid, because they wouldn't let us raise his pay enough. And what do you think he's doing for the War Labor Board? Why, he is the assistant to the regional man in charge of stabilization of wages. They boost one of our men and hire him away from us to keep down the wages of others!" W.C.

Inaudible Voice



Sawed from quartz

Wherever our armed forces are in operation, tiny wafers of Brazilian quartz perform a modern miracle of science. Cut to precision dimensions with Di-Met diamond abrasive wheels, they inaudibly vibrate millions of times per second and stabilize the frequency of radio signals to predetermined limits, thus maintaining constant, dependable contact with headquarters in any part of the world.

Di-Met Rimlocks are extensively used not only on quartz but on all other non-metallic materials of similar dense structure. Applications are readily made on ceramics, porcelain, tile, clay products, glazed face brick, vitrified materials, steatite, etc.

If your manufacturing process requires cutting-off operations on materials of similar composition, try Di-Met Rimlocks. They're made in two bonds — copper and steel — in even diameters from 4" to 24". A 3" size is the smallest regularly made.



THE TREND

TRANSITION PLANNING

There is an understandable, if not really justifiable, tendency to skim rather than read the latest report of the National Resources Planning Board; and so to reject in whole, rather than to consider piecemeal, its recommendations for government planning.

Though the NRPB interrelates them, it nonetheless does point up three separate planning problems—"for transition from war to peace, for development of an expanding economy, and for services and security."

• **Whatever the feeling** about government planning in general, there can be no escape from the planning of government's role in the transition period. And that transition period, incidentally, is apt to be no come-today, gone-tomorrow affair; Prime Minister Churchill this week guessed: "Four years seems to me to be the right length for the period of transition."

When the war ends, the government will be directly employing millions of soldiers and workers, will be preempting better than half of the national productive effort, and will be controlling the entire economy through allocations, rationing, price ceilings, and the like. Even to say that all this should be demobilized overnight is to put forward a plan; to argue that demobilization should be gradual, timed to produce certain specific economic effects, is simply to put forward a different plan. In short, planning government's role in the transition must be done—and done with the cooperation of business if it is not to be done by others in despite of business.

Now, the transition period presents certain peculiar difficulties, precisely because it is neither a period of war nor a period of what we normally conceive as peace, but rather something between the one and the other.

If war planning and peace planning can be contrasted, they differ essentially in this: that war is relatively single-minded as compared with peace. Whatever our internal disagreements over detail, war imposes a certain unanimity of purpose. There is no question whether or not the government should build the armed forces, contract for maximum war production, regulate by priorities, price-fixing, or taxation. But the part that government should play in peace—both as to extent and as to direction—is arguable; any formula is founded upon debatable theories of economics and politics.

• **Transition policies**, clearly, will in part be directed by our fundamental assumptions as to the type of peacetime economy we want to build. It is in the transition, for example, that we would come up against the question of establishing the joint public-private partnership form of mixed corporation which NRPB would like to see for our longer-range peace economy. Similarly, the demobilization of war manpower will affect the collective-bargaining organization of the labor market, and how we plan that demobilization will, therefore, in part depend on our

notions of how strong unions should be "normally." And, what we do with such controls as taxation might be conditioned by what kind of fiscal policy we think necessary for an "expanding economy" in peace.

There is, however, the initial connection of the transition period with the war, which, in a sense, makes it a part of the war period. The overriding criterion for a transition plan is its efficacy in averting economic holocaust. Purely military considerations aside, how fast to release our soldiers, how best to liquidate war contracts, how long to continue rationing are questions that must be decided with a view toward minimizing those frictions and dislocations in the reconversion process which, if they once gain headway, can spiral our economy to a new depression.

• **That this is a very real problem**, recollection of 1918-20 will indicate. Wholesale prices, for instance, eased 10% in a few months after the armistice, then soared 33% in the next year, only to plummet back in the last few months of 1920. Production followed the same pattern—off during reconversion, up to new peaks by mid-1920, and then down again to prewar levels.

If we relax price controls too quickly, a consumer's rush to satisfy pent-up demands may dissipate accumulated savings in temporary inflation; or if we throw onto the labor market millions of workers for whom industry is not ready to provide jobs, consumer demand for durable goods may evaporate; or, if we fail to provide key industries with certain forms of assistance—"seed money," for one—they may prove unequal to the task of reconversion. Contrariwise, we can court economic disaster by demobilizing too slowly, by maintaining too much governmental intervention.

• **Transition planning** is required so that in demobilizing from war we do not cripple ourselves for peace. So far as it is that, it is a common task—just as is fighting the war. And in transition-planning this single-minded purpose takes precedence, both logically and chronologically, over whatever measures business, labor, government, or others might desire with a view toward longer-range objectives. Any formulation of transition policies must of course be in part shaped by the longer-term desiderata; but, the point is, these cannot be permitted to hamper smooth economic conversion.

Though, to be sure, the plant does not grow that way, we must, in short, take the wheat of the NRPB report on transition separate from the chaff. If we do, this report can, at least, serve as an outline of the primary problems of transition to which the nation as a whole must face up—just as any such outline by business, labor, or farm organizations should serve.

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NOT ALONE...

"Funny how you get to thinking up here in the hell of battle. Somehow, pictures of home keep flickering through your mind. . .

"A second ago, to your Axis foe, you were a harmless dot in the sun. Now—a blazing battery of wrathful guns!

"Strange that as you watch him begin to smoke and turn away and drop, you see yourself in your mother's busy kitchen, leaning against the wall and talking—or all at once, above the engine's roar, you hear your brother singing beside you.

"And suddenly you know that, after all, *you and your Corsair are not alone!*

"Strange, too, that the extra power that helped you to victory came from an engine built by men who once made peaceful things—like the refrigerator in your kitchen or the car parked at

your front door. Strangest of all to think that the 'N-K' brand your engine bears may have been put there by your father's hands, in the factory out home."

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